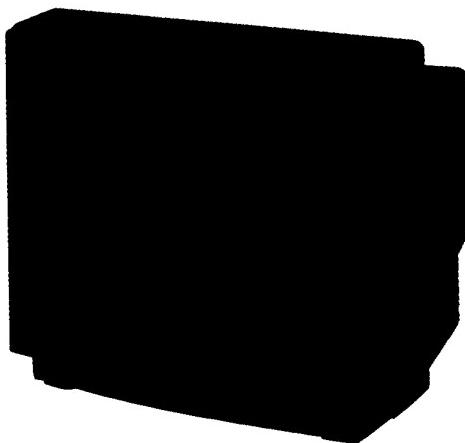


KV-X2533E

RM-689

SERVICE MANUAL



Spanish Model
Chassis No. SCC-D55D-A

Scandinavian Model
Chassis No. SCC-D55D-A



AE-1B CHASSIS

Note: The service manual for RM-689 has been issued separately.

MODELS OF THE SAME SERIES	
KV-X2533E	
KV-X2133E	

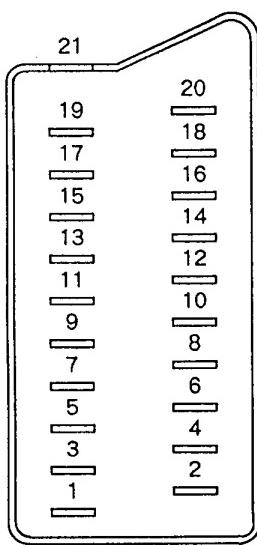
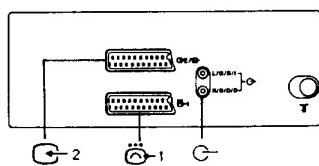
SPECIFICATIONS

Television system	B/G/H	Sound output	15 W + 15 W (music power)
Color system	PAL, SECAM, NTSC3.58, NTSC4.33	Power consumption	104Wh
Channel coverage	VHF : E2-E12 UHF : E21-E69 CABLE : S01-S03, S1-S41	Dimensions	Approx. 575x489x480 mm (w/h/d)
Picture tube	Trinitron tube Approx. 63.5 cm (25 inches) (Approx. 59 cm picture measured diagonally 110-degree deflection)	Weight	Approx. 35.0 kg
Inputs	<input checked="" type="checkbox"/> 1 21-pin connector : CENELEC standard including RGB input. <input checked="" type="checkbox"/> 2 21-pin connector : including S video input <input checked="" type="checkbox"/> 3 Video, Audio : phono jack.	Supplied accessories	RM-689 Remote Commander (1) IEC designation R6 batteries (2)
Outputs	21-pin connector : CENELEC standard Headphones jack : stereo minijack External speaker terminals : 2-pin DIN Audio output jacks : phono jack (output dependent upon TV settings)	Design and specifications are subject to change without notice.	

TRINITRON® COLOR TV
SONY®



21 pin connector (Pin 1, Pin 2)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
2	○	○	Audio input B (right)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
3	○	○	Audio output A (left)	Standard level : 0.5Vrms Output impedance : Less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level : 0.5Vrms Input impedance : More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5–12 V) : Part mode Low state (0–2 V) : TV mode Input impedance : More than 10kohms Input capacitance : Less than 2 nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal : 0.7V±3dB, 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1–3 V) Low state (0–0.4 V) Input impedance : 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
20	○	—	Video input	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
	—	○	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync : 0.3V (-3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open)

* at 20 Hz–20 kHz

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

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NICAM Reception

Reception of NICAM broadcast is possible if the NICAM adaptor (available at your Sony dealer) is installed in the TV.

When the NICAM broadcast is being received, indicators illuminate according to the sound being heard.

Select the sound you want to hear by pressing the A/B bilingual button. Each time the A/B bilingual button is pressed, the sound will change as indicated with arrows in the following chart.

○ means that the indicator lights up.

✗ means that the indicator does not light up.

The NICAM sound being broadcast	The sound you hear (Select with the A/B bilingual button.)	Indicators		
		A	B	✗ * (NICAM)
Stereo		○ ✗	○ ✗	○ ○
A+B (Bilingual)		○ ✗	✗ ○	○ ○
A		○ ✗	✗ ○	○ ○
Regular only	Regular	✗	✗	✗

* When the NICAM adaptor is installed, the ✗ space sound indicator will function as the NICAM indicator (the space sound function will not be affected). When the NICAM broadcast is being received, the NICAM indicator lights up even when the regular sound has been selected.

When you turn on the TV, what sound will be heard?

When the Regular sound and the NICAM sound are the same, the NICAM sound will be heard.

When the Regular sound and the NICAM sound are different, the Regular sound will be heard.

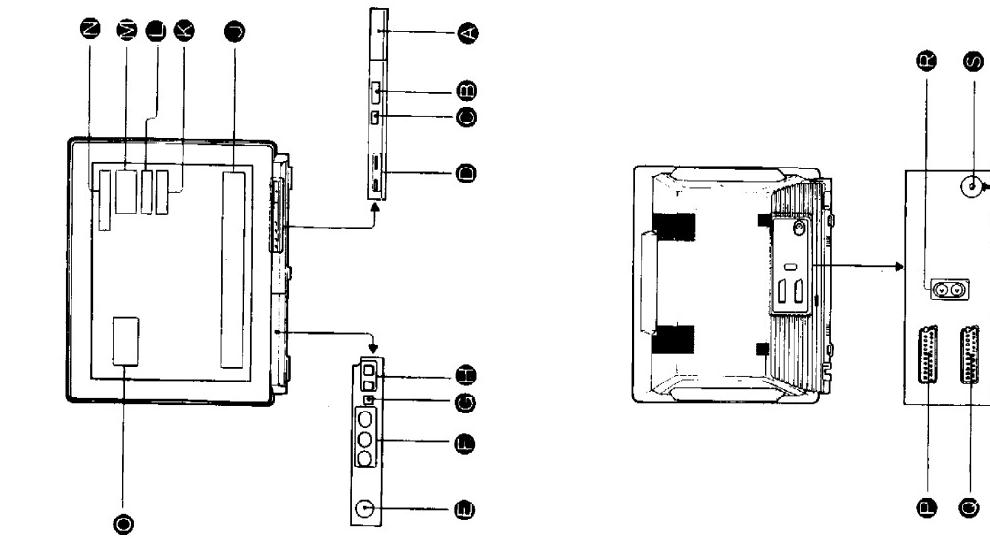
Note

The West German stereo programs can be received as explained in the supplied Operating Instructions.

SECTION 1

GENERAL

1-1. FUNCTION OF CONTROLS



ON THE SET

O Power Switch

Use it to switch the set on and off. When you switch the set on, the programme number of the station tuned in will be indicated in the on-screen display (W) for some seconds. In case of short breaks of operation, you can switch the set on and off using the Remote Commander (See »CONTROLS ON THE REMOTE COMMANDER«).

R Remote control detector

(See »CONTROLS ON THE REMOTE COMMANDER«).

Q Standby/Response indicator

This indicator lights up when the TV set is in standby mode and it flashes each time the set receives signals from the Remote Commander.

P Stereo A/V indications

During bilingual programmes one of the two indicators lights up, depending upon the selected channel A or B. When stereo programmes are broadcast both indicators light up. (See »CONTROLS ON THE REMOTE COMMANDER«).

Jacks and control panel (front of set)

The jacks and the control panel are situated behind a cover. Please press the arrow marking on the cover to open it.

F Headphones jack (stereo minijack)

Connect only stereo headphones.

G Input jacks

Video input jack (phono jack) G-3 (yellow).
Audio input jacks (phono jacks) G- (red and white).

H Mode select button

Use this button to select either the channel/ select mode, volume adjustment Δ or the G- input mode.

I Adjustment buttons +/–

Select at first the item to be adjusted using the Mode select button (P) (P=channel/ select mode), (volume) or (G- input mode), then adjust the item by pressing the + or – button.

You can also use these buttons to reset the picture and sound adjustments to the factory-set levels. For this purpose press both buttons simultaneously.

On-screen display

When you repeatedly press button (I) on the Remote Commander, the following information will be indicated on the screen in turn:

J Picture and sound adjustment items:

contrast, colour, brightness, γ base, δ treble, or balance and their respective levels, as well as α , mute, α –reset, G- space sound, γ loudness and NICAM indications, when the respective buttons are pressed.

K TV-System: I (normal UK broadcast system)

When you press button (J) on the Remote Commander, the following information will be indicated on the screen:

L Channel number

When you press button (K) on the Remote Commander, the following information will be indicated on the screen:

M Programme number or input mode;

G-1, G-, G-2, G-3;

N Indication of the station name

G- AV output indication: 1 G-, 2 G-, 3 G- or TV G- (see »CONTROLS ON THE REMOTE COMMANDER«).

Connections on the rear

E Euro-AV-connector 21-pin G-2/G-2

For connecting a VTR, 8 mm video camera, recorder, a video disc player or in general devices with an S-Video-output.

F Euro-AV-connector 21-pin G-1

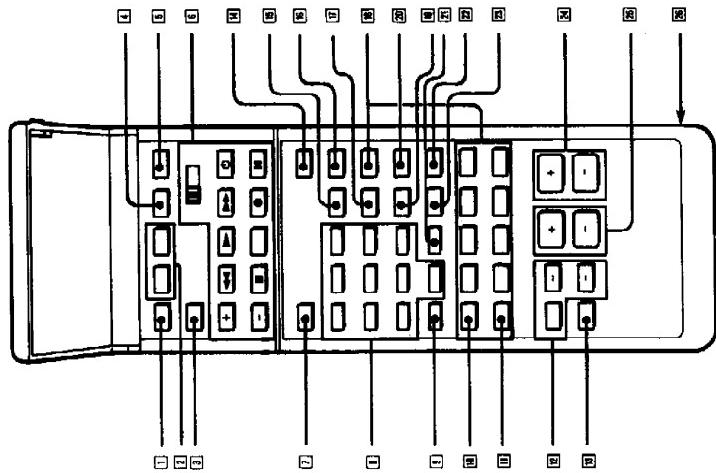
For connecting a VTR, a computer etc. with RGB output.

G Audio-output-jacks (phono jacks) G-

For connecting audio equipment, e.g. an amplifier, so that the sound will be output at the audio equipment. In this case the volume is adjustable on the TV set.

S Aerial terminal T

— 4 —



1 ◊ **Store button:** Used for storing channels. See »TO PRESET CHANNELS«.

5 ◊ **TV-system-select-button:**

This button has no function.

6 ◊ **Video selector and video operation buttons:**

Used for operating Sony video equipment. For details see »OPERATING OTHER EQUIPMENT«.

7 ◊ **Mute button:**

By pressing this button the sound of the set will be switched off and by pressing it once more the sound will be restored.

8 ◊ **Number buttons:**

a) Used to select programme positions or to input channel numbers (in the preset mode).
b) If the set is in the standby mode, press one of the number buttons to switch it.
c) After pressing the output select button **3**, the buttons 1-2 can be used to select the different output connectors.

9 ◊ **-/- Button:**

In case of two digit numbers, press first this button and then the two respective number buttons **1**.

10 ◊ **Button for On-screen display:**

By pressing this button, information about the station tuned-in will be indicated on the screen. The indications will disappear after some seconds with the exception of the programme number and label, which will stay on the screen until the button is pressed once again.

11 ◊ **Time button **5**:**

In TV-mode: If teletext service is broadcast on the selected channel, press this button to display the current time on the screen and once again to make it disappear.

12 ◊ **+/- Buttons for picture and sound adjustments:**

a) **TV-mode:**
The picture and sound adjustments are stored as standard values. You have, however, the possibility to change them to your individual liking. Press the button repeatedly until the required item is indicated in the on-screen display: **1** contrast, **2** colour, **3** brightness, **4** hue (only for NTSC colour system), **5** bass, **6** treble or **7** balance. You can adjust the settings by pressing the + or - button.
b) **Preset-mode:** Use these buttons to name a station. See »TO PRESET CHANNELS«.

ON THE REMOTE COMMANDER
On the set there is a Remote Control detector **1**, which receives the signals of the Remote Commander.

See »TO PRESET CHANNELS«.

13 ◊ **Press+button** Used for selecting the Preset mode.

a) **Press+button** Used for tuning in stations in the Automatic Station Search. See »TO PRESET CHANNELS«.

b) **TV-mode:** Used for fine-tuning a station. See »ADDITIONAL FUNCTIONS«.

14 ◊ **C+ button (Clear)**

Used for clearing programme positions, so that the position will be skipped when the PROGR +/- buttons **2** are pressed. See »TO PRESET CHANNELS«.

15 ◊ **Input-Select-Button**
Press this button to select the audio- or video-signals input at the various input connectors. With each pressing of the button a different connector is selected. The following indications will appear sequentially:
1 → **2** → **(RGB)** → **2** → **2** → **3** → **3**

16 ◊ **TV-Button**
When pressing this button the set returns from standby, video input- or teletext mode to the TV-mode.

17 ◊ **Output-Select-Button**
Press this button to select the audio- or video signals to be output at the **3**/VCR connector.
With each pressing of the button a different output source will be selected. The following indications appear sequentially:
1 → **2** → **3** → **TV**

18 ◊ **Teletext operation buttons:**
These buttons are used for teletext operation. See »VIEWING TELETEXT«.

19 ◊ **V/Loudness button:**
By pressing this button the high and low tones will be emphasized. Press the button again to restore the normal sound. The indications on the screen will be **V** (ON) or **V** (OFF).

20 ◊ **A/B button:**
To select the audio channel of bilingual programmes. Usually the dubbed version is broadcast on channel **A** and the original sound is broadcast on channel **B**. In the video input mode (Euro-AV-connectors) this possibility of selecting channels also exists for stereo VTR connection.

21 ◊ **C (Channel select) button:**
Use this button for direct channel tuning in the TV-mode. See »ADDITIONAL FUNCTIONS«.

22 ◊ **This button has no function on this set:**
23 ◊ **Space sound button:**
Press this button to obtain special acoustic effects. Press it again to restore the normal sound. The indications on the screen will be **(on)** or **(off)**.

24 ◊ **PROGR +/- buttons:**
TV-mode: Use these buttons to scan the available programmes up- or downwards.
Preset mode: Use these buttons to scan the available channels up- or downwards.

25 ◊ **+/- buttons for adjusting the volume:**

26 ◊ **Battery compartment (on the rear):**
Use the Standby-button **1** only when switching the set into standby-mode. You can switch it on again by pressing the TV-button **10** or one of the number buttons **1**. To return to the teletext mode, press **1** or **2** or **3** button. There will be a slight delay before the picture is restored.

Note

Use the Standby-button **1** only when switching the set into standby-mode. The set will not be used for a longer period of time, switch it off by using the Power switch **A**.

1-2. TO PRESET CHANNELS

Use the buttons on the Remote Commander for presetting. In total there are 60 programme positions at your disposal for storing channels.

There are two different ways of tuning in channels:

1. Direct Channel Tuning

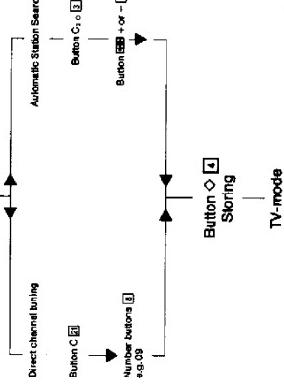
If you know the channel number of a station you can input it directly.

2. Automatic Station Search

The set searches automatically for stations.

Button \rightarrow [1]

Select the programme position using the number buttons [8].



1. **Direct Channel Tuning**
1. Press the Preset button \rightarrow [1]. You are now in the preset mode of the set. The programme number in the on-screen display [V] starts blinking.

6

1. Press button **C** [F]. The indication **“C”** and the channel number start blinking in the display [V]. Select the channel number with two digits (e.g. 22) using the number buttons [8].

If you want to store further channels, repeat the steps 1 to 4.

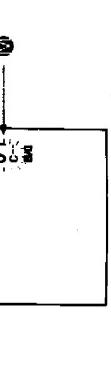
2. Automatic Station Search

If you want to store further channels, repeat the steps 1 to 4.



1. With the PROGR buttons $+/-$ [2] or the number buttons [8] you can select the programme position. In case of two-digit numbers, press first the button $-/-$ [2] and then the two number buttons.

2. With the buttons PROGR $+/-$ [2] or the number buttons [8] you can select the programme position. In case of two-digit numbers, press first the button $-/-$ [2] and then the two number buttons.



6. If you want to store further stations, repeat the steps 1-5.

Selecting of unused programme positions
Using button **C** [F] you have the possibility to skip unused programme positions (e.g. without a stored station), when pressing the buttons PROGR $+/-$ [2] on the Remote Commander.

1. Press button \rightarrow [1]. You are now in the preset mode of the set.

2. Use the buttons PROGR $+/-$ [2] to select a programme position, which you want to have skipped.

3. Press button **C** \circ [3].

4. Press button \diamond [4] to store the cleared programme position and to return to the TV-mode.

The skipped programme position still appears when you press the number buttons [4] on the Remote commander.

If you want to name a station
After presetting the stations you have the possibility to name them. The selected name will appear in the on-screen display [V].

1. Press the preset button \diamond [1].

2. Press the button \rightarrow [2]. The first column of the station name starts blinking. Press either button $+/-$ [2] and select the desired character (number or letter, 0-9, A-Z, or – for a blank space).

3. Press button \diamond [2] again. Now the second column starts blinking and you can select the second character. In this way five characters can be selected.

4. Press button \diamond [4] to store the station name.



Notes
• If you press the preset button \rightarrow [2] instead of button \diamond [1] the set will return to the TV-mode without storing the channels.

• If you press a wrong programme or a channel number, an “x” will be displayed on the screen.

- When pressing two number buttons, the second number button should be pressed within 5 seconds after the first one, otherwise the operation will be cancelled.
- If you have found the desired station, press button \diamond [4]. Now the selected station is stored and you are back in the TV-mode.

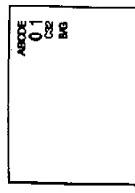
ADDITIONAL FUNCTIONS

Direct Channel Tuning in the TV-mode
You have the possibility to tune in channels directly, when the set is in the TV-mode without storing these channels. Example: If you tune in channel number 32 and then switch the set off or change the programme position, this channel will be cancelled.

1. Press button \rightarrow [1]. In the display [V] the indication **“C”** will appear.

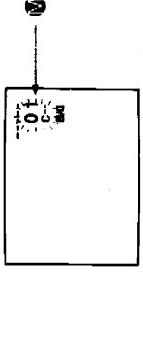
2. Select the channel number with two digits using the number buttons [8] (e.g. for channel 4 press first 0, then 4). The indication on the screen will disappear within some seconds.

Manual Fine Tuning
If the reception of a channel is not satisfactory, you have the possibility to deactivate the Automatic Fine Tuning, which is usually in operation during presenting in order to tune in the best possible picture. Press one of the tuning buttons \rightarrow [2] $+/-$ [2] to fine-tune a channel. The Automatic Fine Tuning will be restored when the respective programme position is pressed once again.



- If you press the preset button \rightarrow [2] instead of button \diamond [1] the set will return to the TV-mode.
- If you press a wrong programme or a channel number, an “x” will be displayed on the screen.
- When pressing two number buttons, the second number button should be pressed within 5 seconds after the first one, otherwise the operation will be cancelled.

5. If you have found the desired station, press button \diamond [4]. Now the selected station is stored and you are back in the TV-mode.



1-3. VIEWING TELETEXT

The set is capable of receiving NICAM, which is a newly developed digital stereo broadcast system. NICAM programmes are broadcast in three ways: stereo, bilingual or monaural sound besides the regular (FM mono) sound, and you can select the sound you want to hear by pressing the A/B button [2]. Each time the button is pressed, the sound changes sequentially, as indicated with arrows in the following chart.

NICAM sound being broadcast	The sound you hear (Select with the A/B button [2])
Stereo	Stereo → Regular → Stereo (etc.)
Monoaural	A → B → Regular → A (etc.)
Bilingual	A → B → Regular → A (etc.)

Whenever a NICAM broadcast is received, the **[NICAM]** indicator appears on the screen and disappears after a few seconds. When the NICAM programme ends, the **[NICAM]** indicator appears for a few seconds.

To view the teletext service, use the Remote Commander. The buttons for teletext operation are indicated in green.

Operation

- 1 Select the TV channel for the desired teletext service. If the signal is weak, teletext errors often occur.
- 2 Press [2] (TEXT/MIX) to display the teletext service.
- 3 Key in the three digits of the desired page using the number buttons. If an error is made, complete the three-digit sequence by keying in any digit. Then, re-enter the correct page number.

The requested teletext page is displayed.

To request the index page

Press [2] (INDEX). If the necessary signal is not being broadcast, page 100 is displayed.

To access the next or preceding page

Press [2] (PAGE +) or [2] (PAGE -).

To superimpose the teletext display on the picture (MIX)

Press [2] (2) twice from the TV mode. Press [2] again to return to the TEXT display.

To suppress the teletext display so that the picture is restored

Press [2] (text clear). This button can be operated from both the text and mix displays.

To prevent a teletext page from being updated/changed

Press [2] (HOLD). The HOLD symbol appears on the screen. To resume normal teletext reception, press [2] (TEXT/MIX).



To resume normal teletext reception, press [2] (2).

To enlarge the teletext display

Press [2] once to enlarge the upper half of the display. Press again to enlarge the lower half of the display. And press again to return to the normal display.

To reveal concealed information such as answers to a quiz

Press [2] (REVEAL). Press again to conceal the answers.

To watch the TV programme while waiting for a requested page to be displayed

1 Request the new page.

x means that the indicator [2] lights up or the indication appears.

o means that the indicator does not light up or the indication is not displayed.

To return to the TV mode, press TV [2] on the Remote Commander.

The teletext service can be displayed directly from the standby mode by pressing [2] (TEXT/MIX).

To receive the teletext service of a different TV channel

- 1 Press TV [2] to return to the TV mode.
- 2 Select the desired TV channel.
- 3 Press [2] (TEXT/MIX).

Note

Buttons not referred to in the text do not operate.

2 Press [2] to watch the TV programme. The requested page number and other data appear at the top of the screen. When the requested page has been captured, the page number is displayed in the top left-hand corner of the screen.

P101

To view this page, press [2] (2).

To have a requested page displayed at a pre-determined time

- 1 Request a time coded page (e.g. alarm page).
- 2 Press [2] (TP ON). "1 * * * - will appear at the bottom of the screen.



3 Enter your request time with the number buttons, using four digits. For example, 07:30:

T0730

To watch the TV programme until the requested time, press [2] (TEXT). At the requested time, the page number will be displayed at the bottom of the screen. To view the page, press [2] (2). To cancel the request, first ensure that the teletext page is displayed, then press [2] (TP OFF).

FASTEXT Operation

Selection may also be made by entering the three digit page number in the normal way.

Correct FASTEXT operation relies on the necessary signals being transmitted by the Broadcasting Authorities. It is possible that some Broadcasters will not support this transmission.

If FASTEXT is not transmitted, the decoder will operate as outlined above.

The sound being broadcast	The selected sound	Indicators [2]			NICAM indication on the screen
		A	B	E	
NICAM + Regular	Stereo	x	x	x	x
	A	x	o	x	
	B	c	x		
	Regular	o	o	o	o
Regular	Regular	o	o	o	o

11.4. OPERATING OTHER EQUIPMENT

- To view the input picture
Press the **C-15** button repeatedly until the desired input signal indication appears on the screen.
- 1: to view the audio and video signal input through the

To operate Sony video equipment
The video operation buttons [5] on the Remote Commander can operate certain VTRs and video disc players manufactured by Sony.

1. Switch the video selector to the desired position.

VIDEO 1: to operate Sony Betamax VTR and SLV 202 VHS.
VIDEO 2: to operate Sony 8 mm VTR.
VIDEO 3: to operate Sony VHS VTR.
MDF: to operate Sony video disc player including a multi disc player.

תְּהִלָּה וְעַמְּדָה

 2: To view the S video signal (from a VTR equipped with an S video output) input through the **G-2** connector.

 3: To view the audio and video signal input through the **G-3** connectors and the audio input jacks G- (yellow, white and red).

PHGR +/-: to start operation.
PHGR +/-: to select the desired programme on the VTR.
▶ : to start playback, or to release the pause mode

 : to stop the tape or the disc

 : to rewind the tape from stop mode or to rapidly go back to the desired position on the disc or tape from playback mode.

To return to the TV mode, press the TV-button [18].

To select the signal to be output from the $\text{G} \cdot 2/\Xi$ - connector
Press the $\text{G} \cdot$ -button  repeatedly until the desired output

source is indicated on the screen:

- 1 **1**: The audio and video signal input through the **2**-**1** connectors is output from the **3**-**2**-**3** connector.
- 2 **2**: The audio and video signal input through the **3**-**2**-**3** connector is output from the **3**-**2**-**3**.

3 G: The audio and video signal input through the G-3 connector.

TW G: The audio and video signal input through the **T** aerial terminal (i.e. the TV signal) is output from the **G 2/EZ** connector.

- ▶ ■ : to start playback, or to release the pause mode
 - ▶ ■ : to stop the tape or the disc
 - ◀ ■ : to rewinding the tape from stop mode or to rapidly go back to the desired position on the disc or tape from playback mode
 - ▶ ■ : to fast forward wind from stop mode or rapidly advance the tape or disc to the desired position from playback mode
 - : to start recording on the VTR
Be sure to press this button and the one on the right simultaneously
 - : to switch the video equipment on and off
 - : to stop the tape or the disc temporarily (pause)

1.5. CONNECTING OTHER EQUIPMENT

1-5. CONNECTING OTHER EQUIPMENT

Rear of the set

Front

VTR - computer Macintosh

VTR - 8 mm video camera recorder, video disc player, etc.

Commercially available cord adapted with a 21-pin connector

Signal flow

卷之三

S video input (Y/C Input) Video signals may be separated into Y (luminance or brightness), and C (chrominance) signals.

Usually these two signals are combined in a VTR and output as one signal, and supplied to a TV. Separation of the Y and C signals prevents them from interfering with one another, thereby improving picture quality (especially in luminance). This set is equipped with a S-video input through which these separated signals can be input directly. Connect the S-video output jack on the VTR to the S-video input on this set.

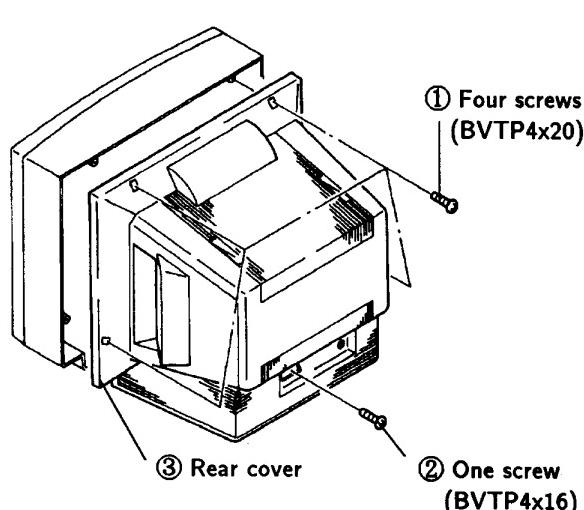
Note: Not all VTR's are equipped with S video output capability. (Refer to VTR operating manual.)

Note The TV-signal is always output at the EURO-AV connector.

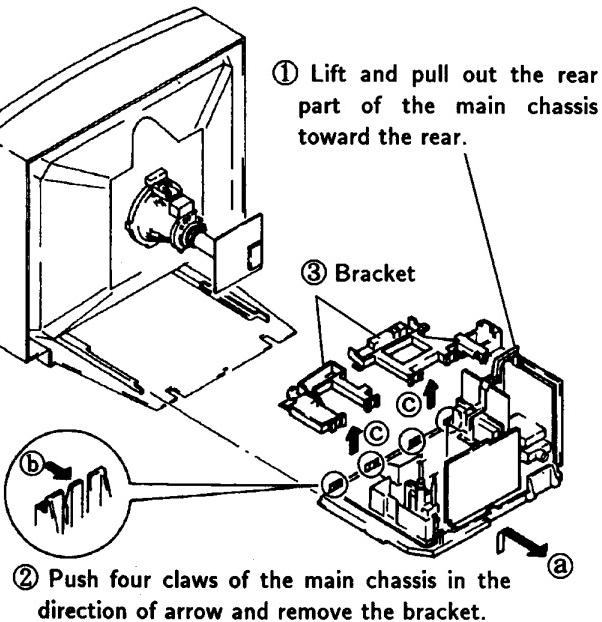
四

SECTION 2 DISASSEMBLY

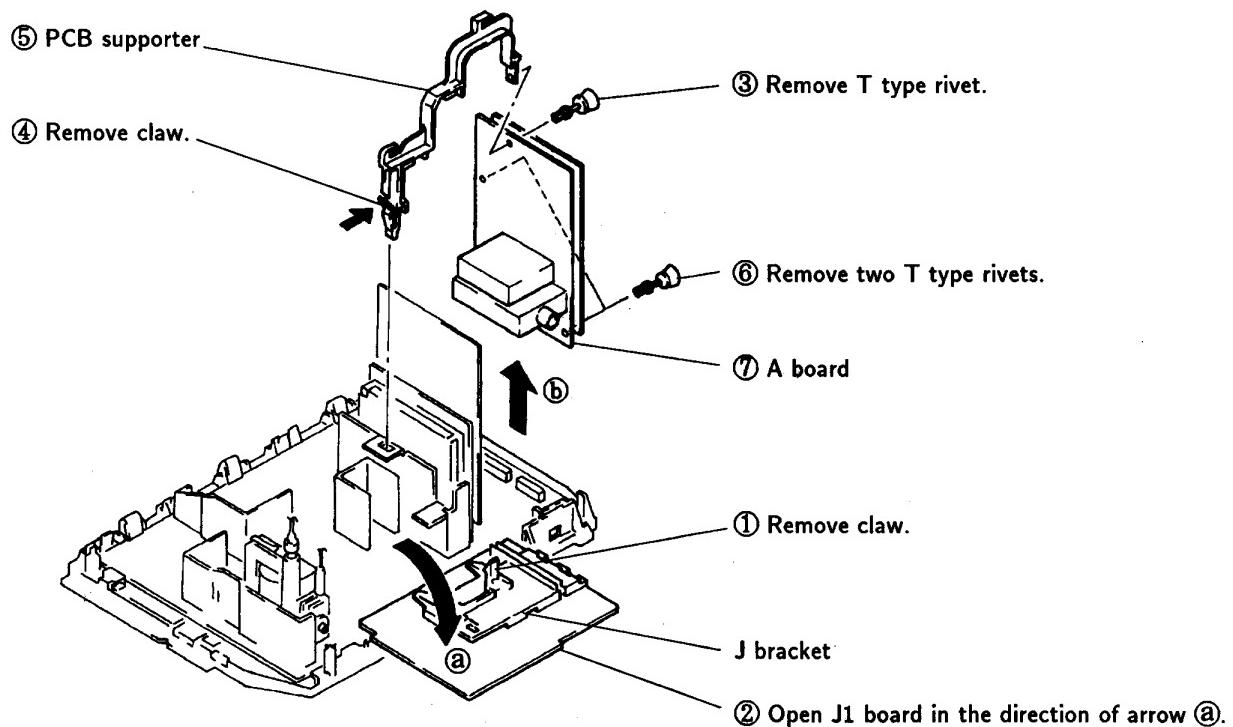
2-1. REAR COVER REMOVAL



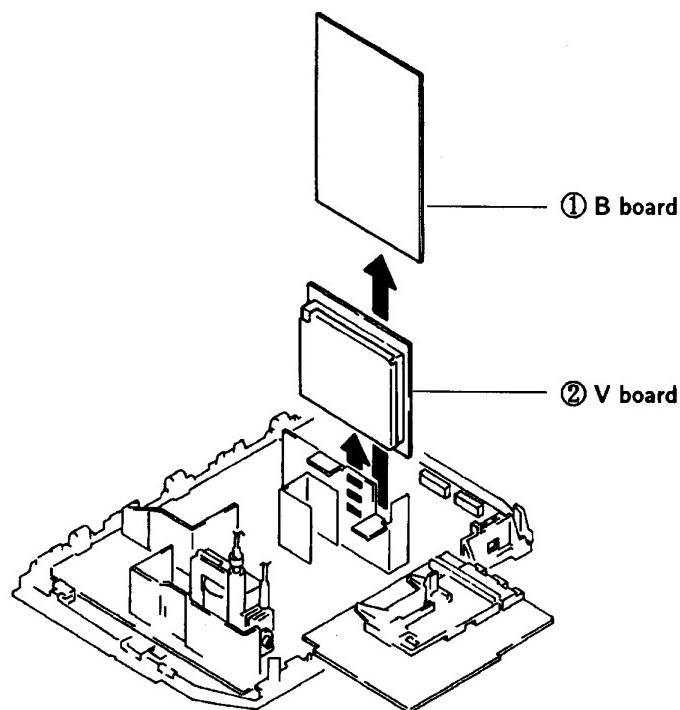
2-2. CHASSIS ASSEMBLY REMOVAL



2-3. A AND J1 BOARDS REMOVAL

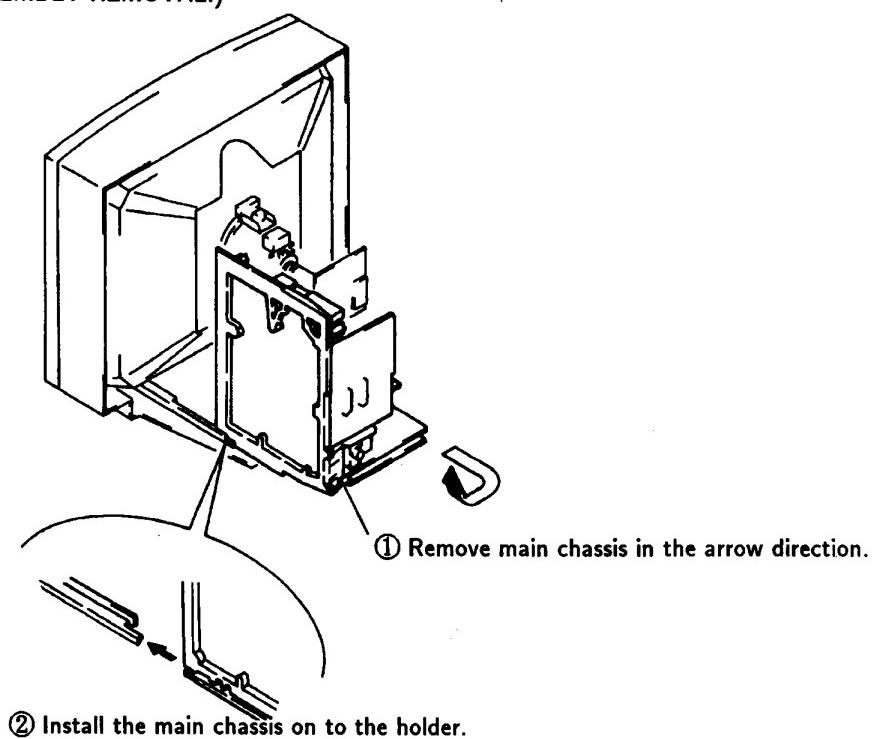


2-4. B AND V BOARDS REMOVAL

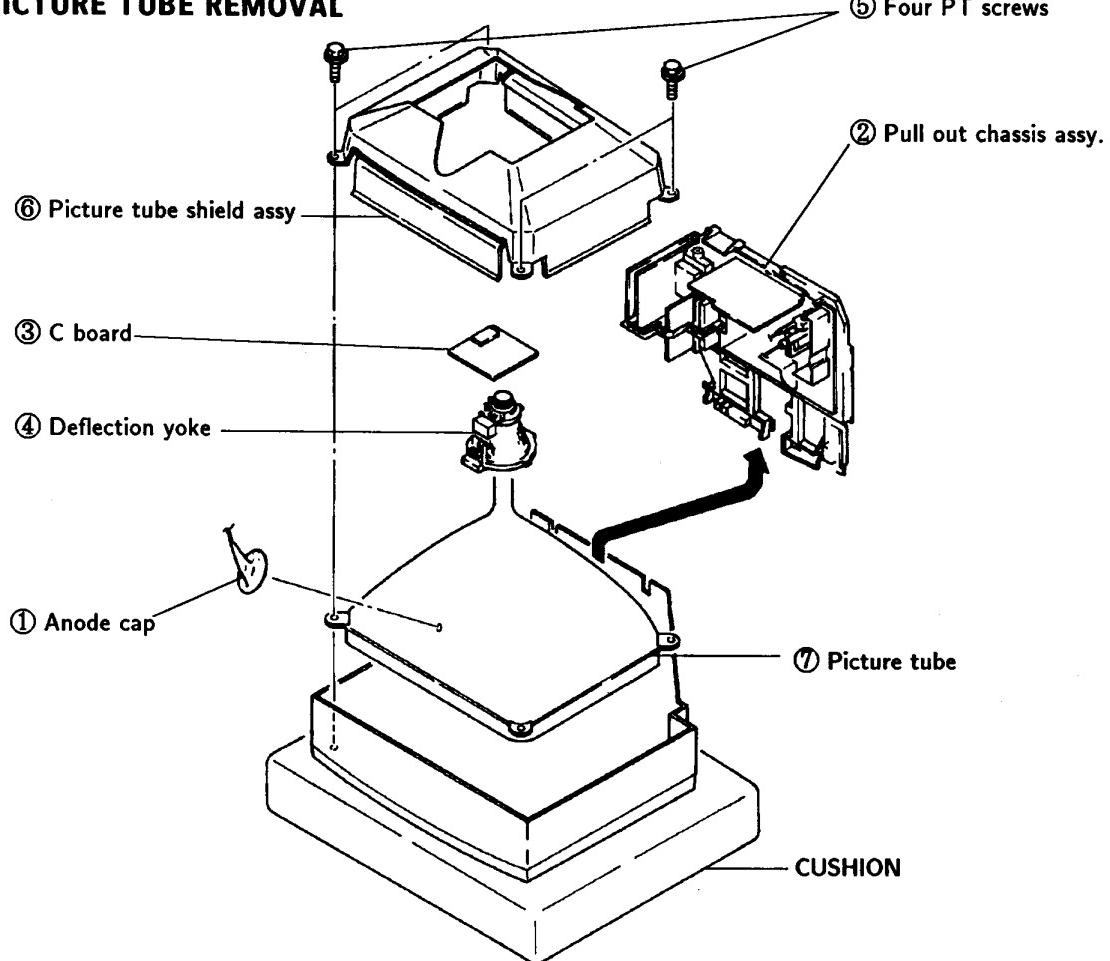


2-5. SERVICE POSITION

* Remove the connector bracket and then perform the following servicing.
(Refer to 2-2. CHASSIS ASSEMBLY REMOVAL.)

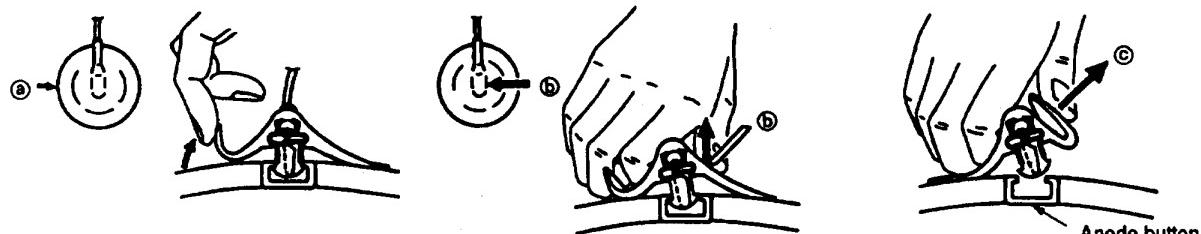


2-6. PICTURE TUBE REMOVAL



• REMOVAL OF ANODE-CAP

• REMOVING PROCEDURES



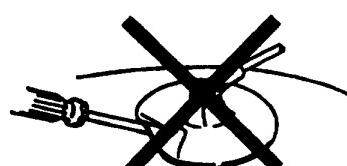
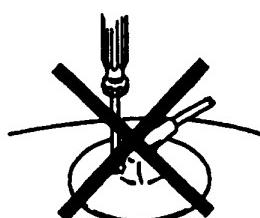
① Turn up one side of the rubber cap in the direction indicated by the arrow ②.

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ③.

③ When one side of the rubber cap is separated from the anode button, the snode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ④.

• HOW TO HANDLE AN ANODE-CAP

- ① Don't hurt the surface of anode-caps with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



SECTION 3 SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :
 - Contrast 80%
 - (or remote control normal)
 - Brightness 50%

- Carry out the following adjustments in this order:
 - Beam landing
 - Convergence
 - Focus
 - White balance

Note : Testing equipment required

- Color bar/pattern generator
- Degausser
- DC power supply
- Digital multimeter
- Oscilloscope

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

- Input the white signal with the pattern generator.
 Contrast }
 Brightness } normal
- Set the pattern generator raster signal to red.
- Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
 (See Figures 3-1 through 3-3.)
- Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
- Switch the raster signal to blue, then to green and verify the condition.
- When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
- If the beam does not land correctly in all the corners, use a magnet to adjust it.
 (See Figure 3-4.)

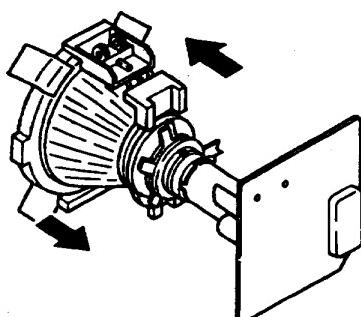


Fig. 3-1

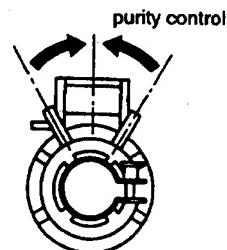


Fig. 3-2

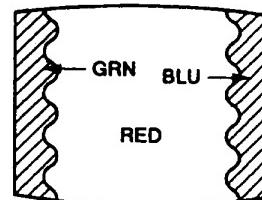


Fig. 3-3

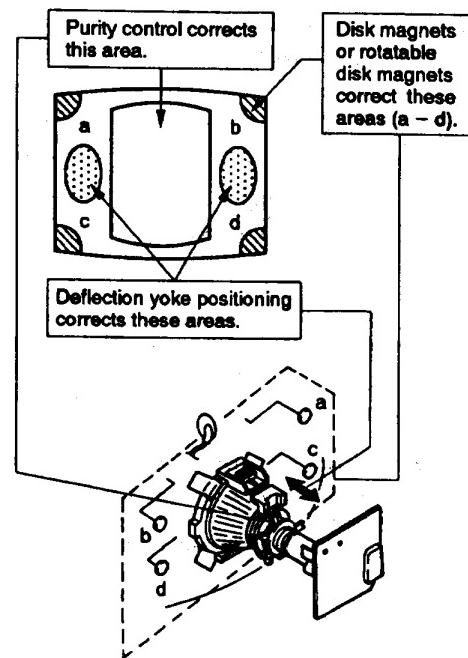


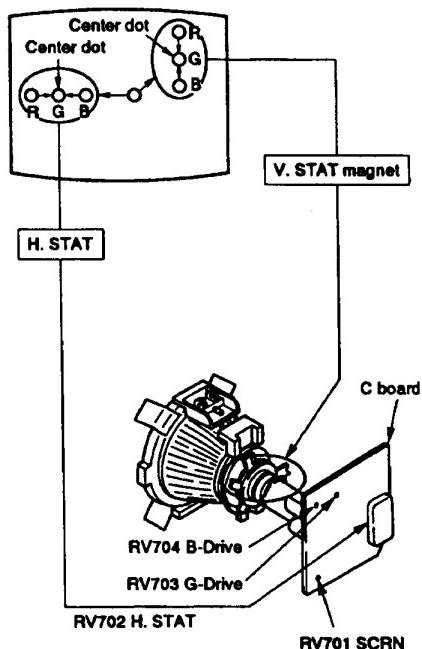
Fig. 3-4

3-2. CONVERGENCE

Preparations :

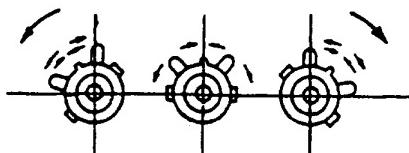
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence

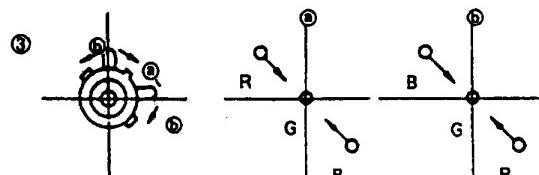
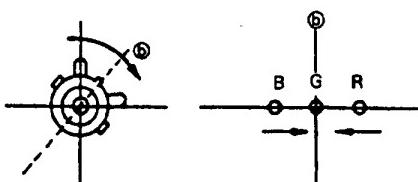
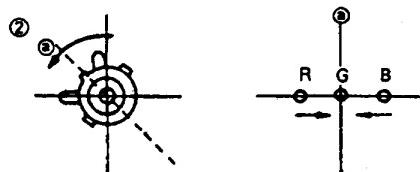
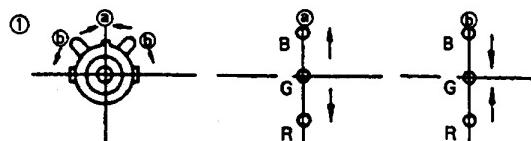


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor can not bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other's settings.)

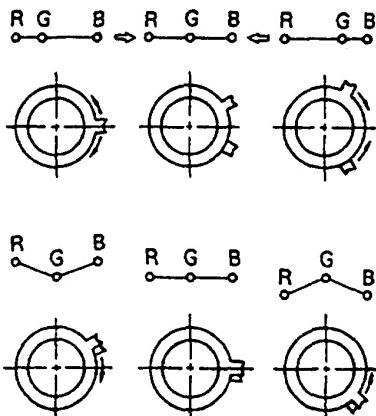
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the ① and ② arrows, the red, green, and blue points move as shown below.

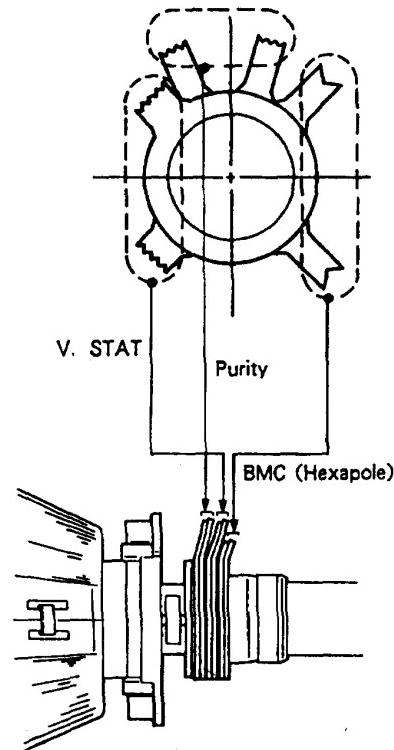


- Operation of BMC (Hexapole) Magnet



- The respective dot operations resulting from the operation of each magnet are not completely independent, so be sure to perform adjustment while tracking.

Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).



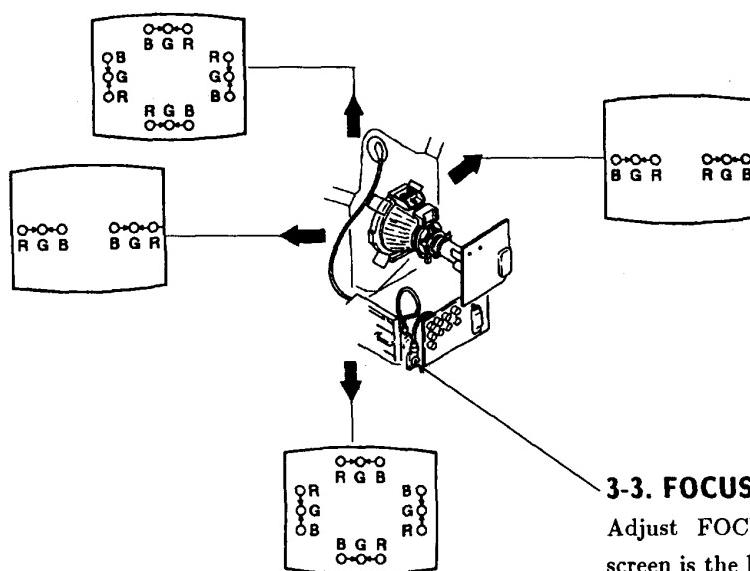
(2) Dynamic convergence adjustment

Preparations :

Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

- Slightly loosen the deflection yoke screws.
- Remove the deflection yoke spacer.

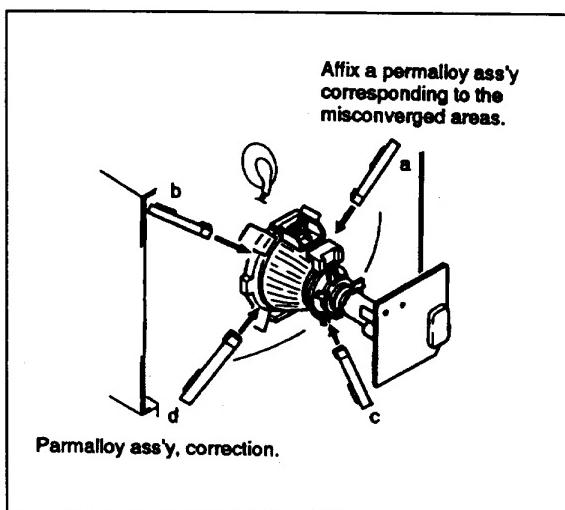
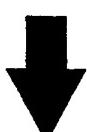
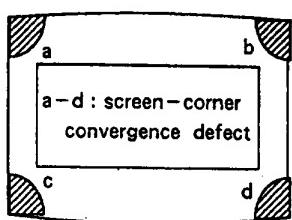
- Move the deflection yoke as shown in the figure below and optimize the convergence.
- Tighten the deflection yoke screws.
- Install the deflection yoke spacer.



3-3. FOCUS

Adjust FOCUS so that the whole screen is the best focus.

(3) Screen corner convergence



3-4. WHITE BALANCE

[Screen G2 setting]

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 170V DC to the R, G, and B cathodes with an external power supply.
4. While watching the picture, adjust G2 control RV701 (Screen) to the point just before the return lines disappear.

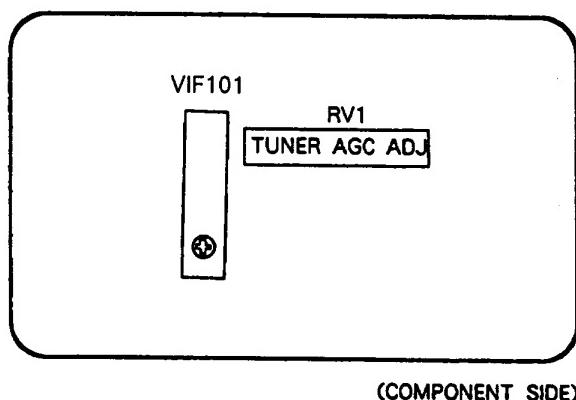
[White balance adjustment]

1. Input an all-white signal from the pattern generator.
2. Set the picture brightness and color controls to their normal levels.
3. Use the RV704 (B Drive) and RV703 (G Drive) to adjust white balance.

In the adjustments below, have the picture color and brightness settings at their normal levels unless there is a specific instruction to the contrary.

SECTION 4 CIRCUIT ADJUSTMENTS

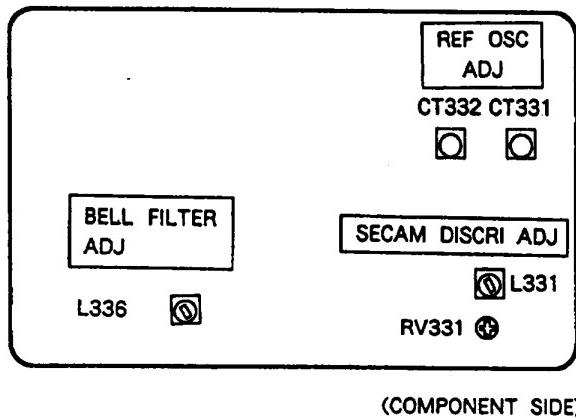
4-1. A BOARD ADJUSTMENT



TUNER AGC ADJUSTMENT (VIF101, RV1)

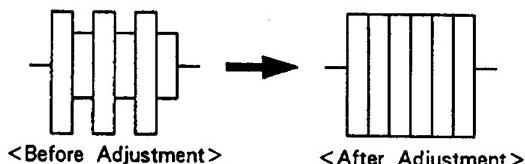
1. Align with an appropriate signal between stations.
2. Adjust RV1 so that snow noise and cross modulation just disappear from the picture.

4-2. B BOARD ADJUSTMENTS



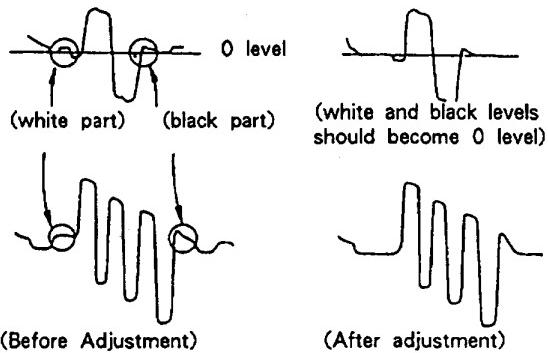
BELL FILTER ADJUSTMENT (L336)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to the emitter of Q335.
3. Adjust L336 so that the waveform is flat.



DISCRIMINATION ADJUSTMENT (RV331 and L331)

1. Input a SECAM color bar signal.
2. Connect the oscilloscope to pin ① of IC331.
3. Adjust RV331 so that the white and black sections of the waveform at pin ① come to the 0 level.
4. Connect the oscilloscope to pin ③ of IC331.
5. Adjust L331 so that the white and black sections of the waveform at pin ③ come to the 0 level.



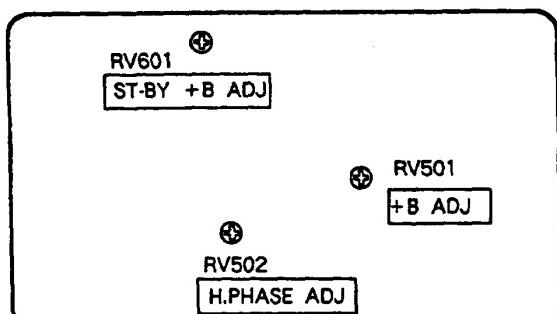
REFERENCE OSCILLATOR ADJUSTMENT (CT332 8.8MHz)

1. Input a PAL color bar signal.
2. Ground pin ⑦ of the IC331.
3. Adjust CT332 to obtain synchronization.

REFERENCE OSCILLATOR ADJUSTMENT (CT331 7.16MHz)

1. Input an NTSC color bar signal.
2. Ground pin ⑦ of IC331.
3. Adjust the CT331 to obtain synchronization.
4. Remove the jumper grounding pin ⑦ of IC331.

4-3. D BOARD ADJUSTMENTS



(COMPONENT SIDE)

+B ADJUSTMENT (RV501)

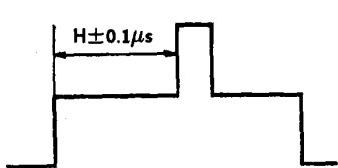
1. Connect the digital multimeter to TP91.
2. Adjust RV501 to obtain $135 \pm 0.2V$.

ST-BY +B ADJUSTMENT (RV601)

1. Put the system into \odot standby mode (remote commander).
2. Connect the digital multimeter to TP91.
3. Adjust RV601 to obtain $135 \pm 3V$.
4. Take the system out of \odot standby mode (remote commander).

H.PHASE ADJUSTMENT (RV502)

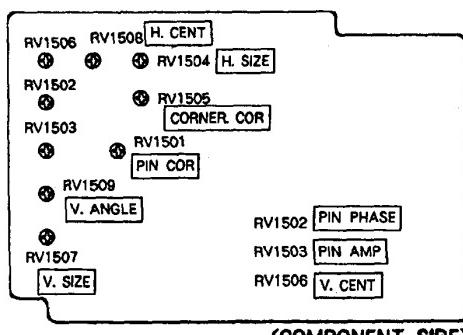
1. Input a PAL color bar signal.
 2. Set the picture and brightness controls to their normal levels.
 3. Set RV1508 (H.CENT) to its mechanical center.
 4. Connect the oscilloscope to pin ⑪ (SCP) of IC 501.
 5. Rotate RV502 to adjust to $H \pm 0.1\mu s$.
- See below table for the H value.



Standard of H.Phase

Model Size	H
21"	$5.6\mu s$
25"	$5.1\mu s$
29"	$5.5\mu s$

4-4. J1 BOARD ADJUSTMENTS

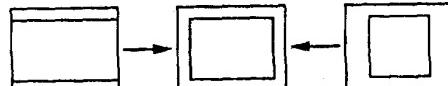


(COMPONENT SIDE)

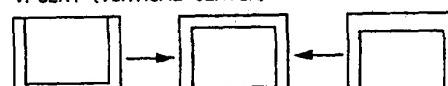
RV1508 H. CENT (HORIZONTAL CENTER)



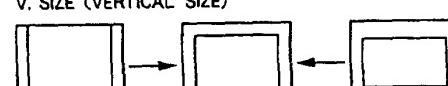
RV1504 H. SIZE (HORIZONTAL SIZE)



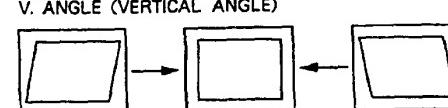
RV1506 V. CENT (VERTICAL CENTER)



RV1507 V. SIZE (VERTICAL SIZE)



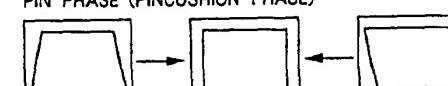
RV1509 V. ANGLE (VERTICAL ANGLE)



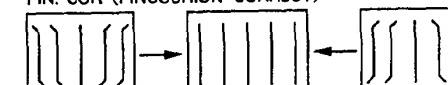
RV1503 PIN AMP (PINCUSHION AMPLIFIER)



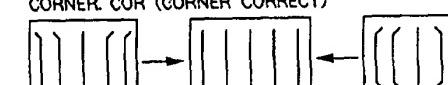
RV1502 PIN PHASE (PINCHUSHION PHASE)



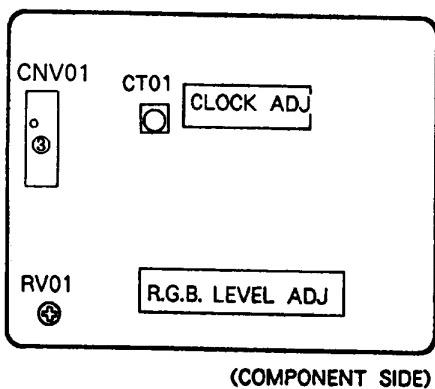
RV1501 PIN. COR (PINCHUSHION CORRECT)



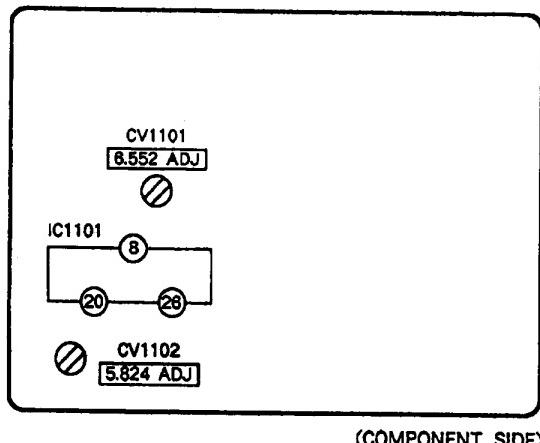
RV1505 CORNER. COR (CORNER CORRECT)



4-5. V BOARD ADJUSTMENTS



4-6. A1 BOARD ADJUSTMENTS



CLOCK ADJUSTMENT (CT01)

1. Remove the pin ③ of V-01 connector.
2. Put the system into text mode.
3. Adjust CT01 so that the picture does not move.

RGB LEVEL ADJUSTMENT (RV01)

1. Maximize the picture setting.
2. Adjust RV01 so that the RGB output is 0.75V.

6.552MHz (CARRIER Freq) Adjustment (CV1101)

1. Tune in NICAM signal.
 2. Connect the frequency counter to pin ⑧ of IC1101.
 3. Adjust CV1101 so that frequency becomes $6.552\text{MHz} \pm 30\text{Hz}$.
- Confirmation
Connect X input of oscilloscope to IC1101 pin ⑯, and Y to pin ⑰.
Confirm waveform by X-Y mode.
Confirm that waveform as OK in Fig observed clearly and without tilt.

5.824MHz (Clock Freq) Adjustment (CV1102)

1. Tune in a NICAM signal.
2. Connect the frequency counter to pin ⑯ of IC1101.
3. Adjust CV1102 so that frequency becomes $5.824\text{MHz} \pm 30\text{Hz}$.



4-7. SECONDARY ADJUSTMENT

SUB BRIGHTNESS ADJUSTMENT

1. Set the system to receive a test pattern.
 2. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.
 3. Switch off the power.
 4. While depressing the adjusting buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
 5. Minimize the \odot contrast setting.
 6. Adjust the \odot brightness control so that the gray scale 0 IRE section is cut off completely and the 20 IRE section is barely glowing.
 7. Depress the \diamond (store) button of the remote commander.
- (SUB mode is released)

If there is no test color pattern

1. Set the system to receive a color pattern.
2. Press on the remote commander to put system into normal mode.

Set the \odot color to its normal state.

3-5. are the same as above.

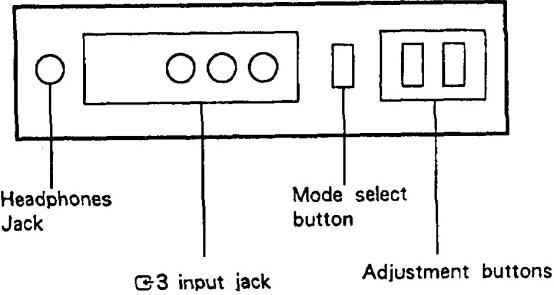
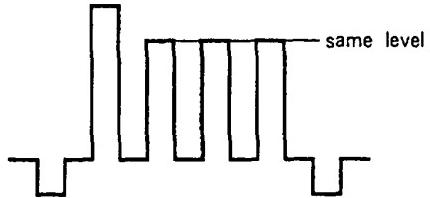
6. Since 20 IRE is nearly blue, adjust the \odot brightness control so that the blue barely glows.

7. is the same as above.

8. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.

SUB COLOR ADJUSTMENT

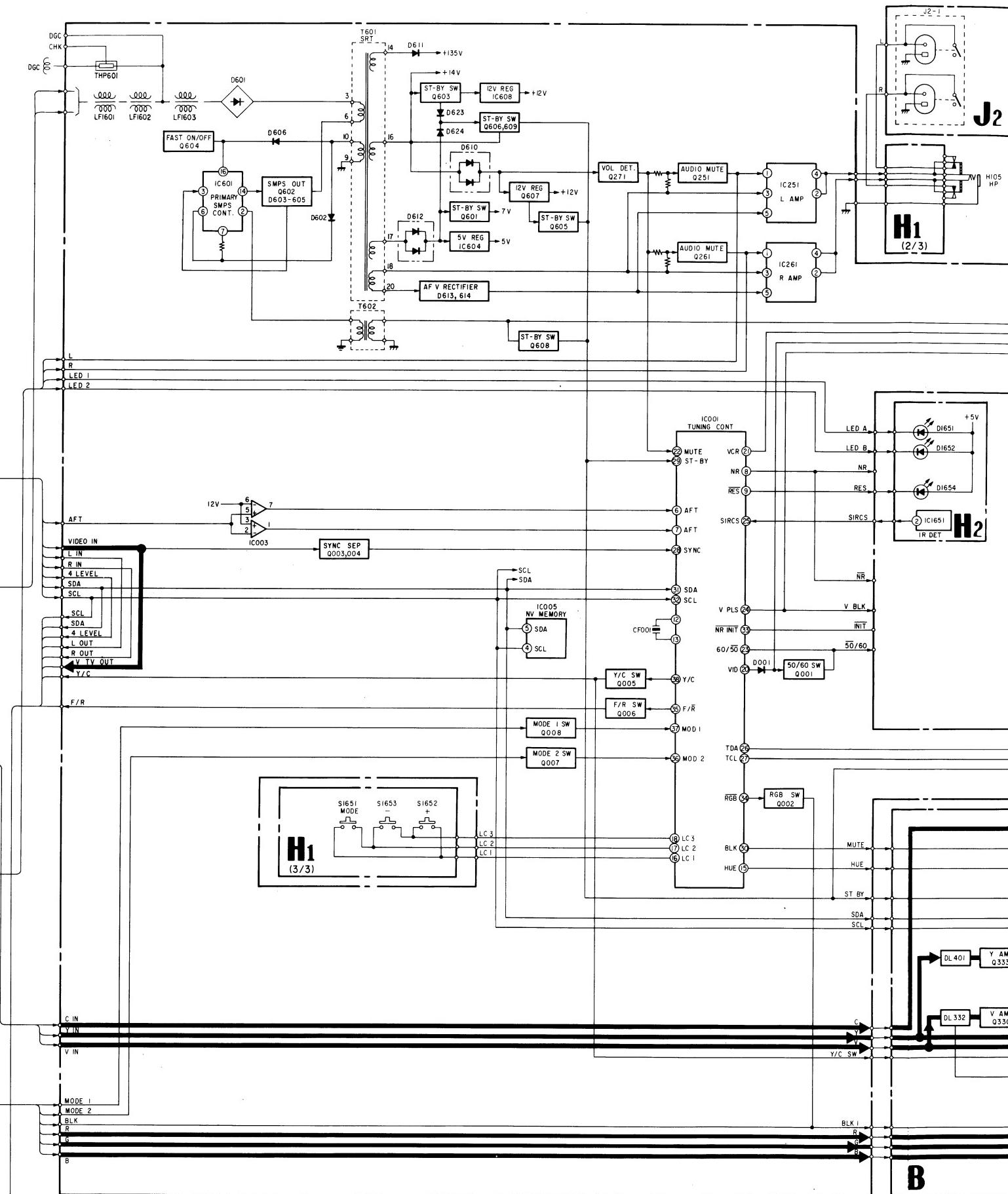
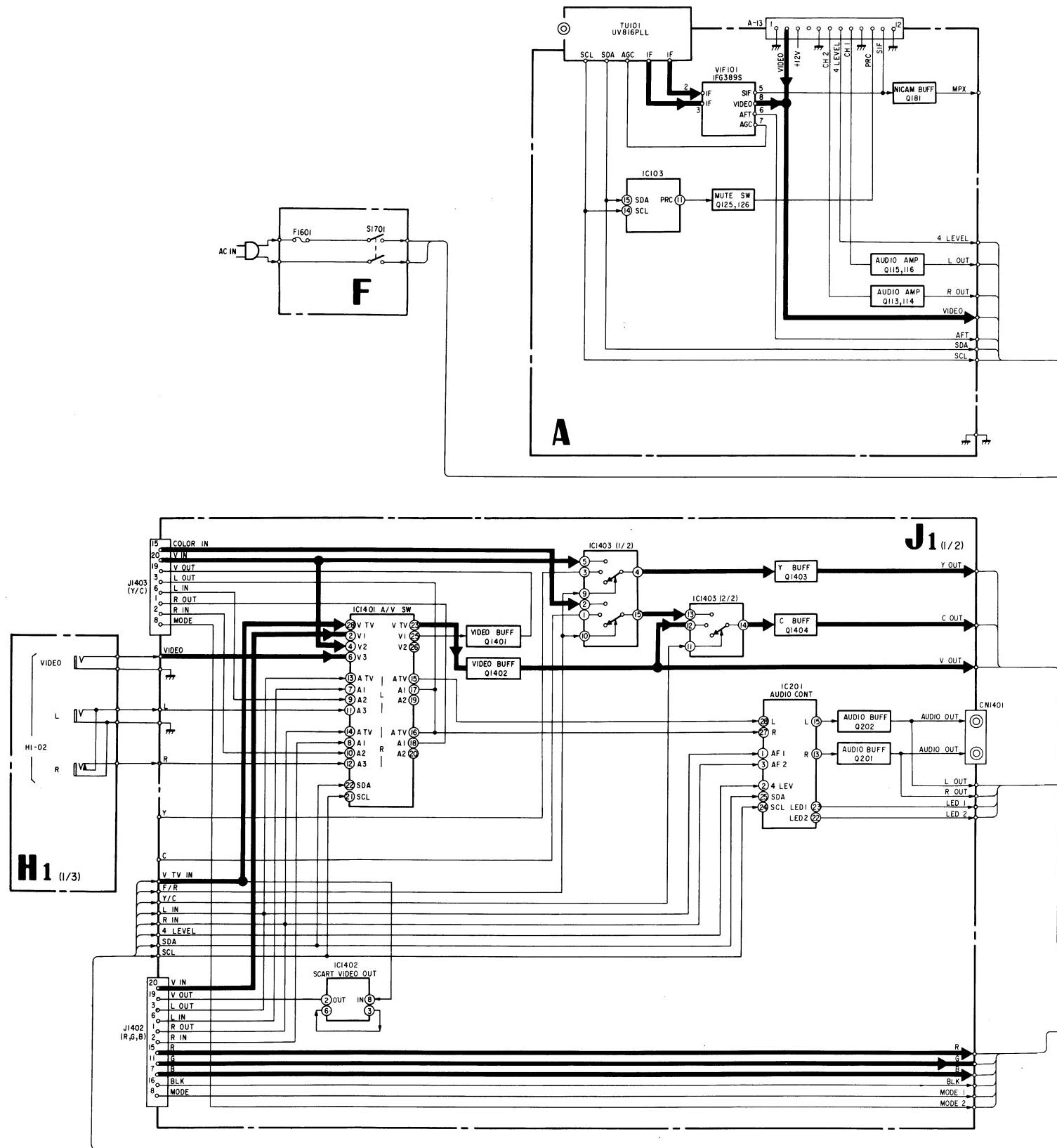
1. Set the system to receive color bars.
2. Press $\rightarrow \cdot \leftarrow$ on the remote commander to put the system into normal mode.
3. Cut off the power.
4. While depressing the adjustment buttons + and - simultaneously, turn on the power. (SUB mode is obtained)
5. Adjust the color control so that the B out waveform (pin ② of C board connector CNC72) is as shown in the figure below.
6. Depress the \diamond (store) button of the remote commander. (SUB mode is released)

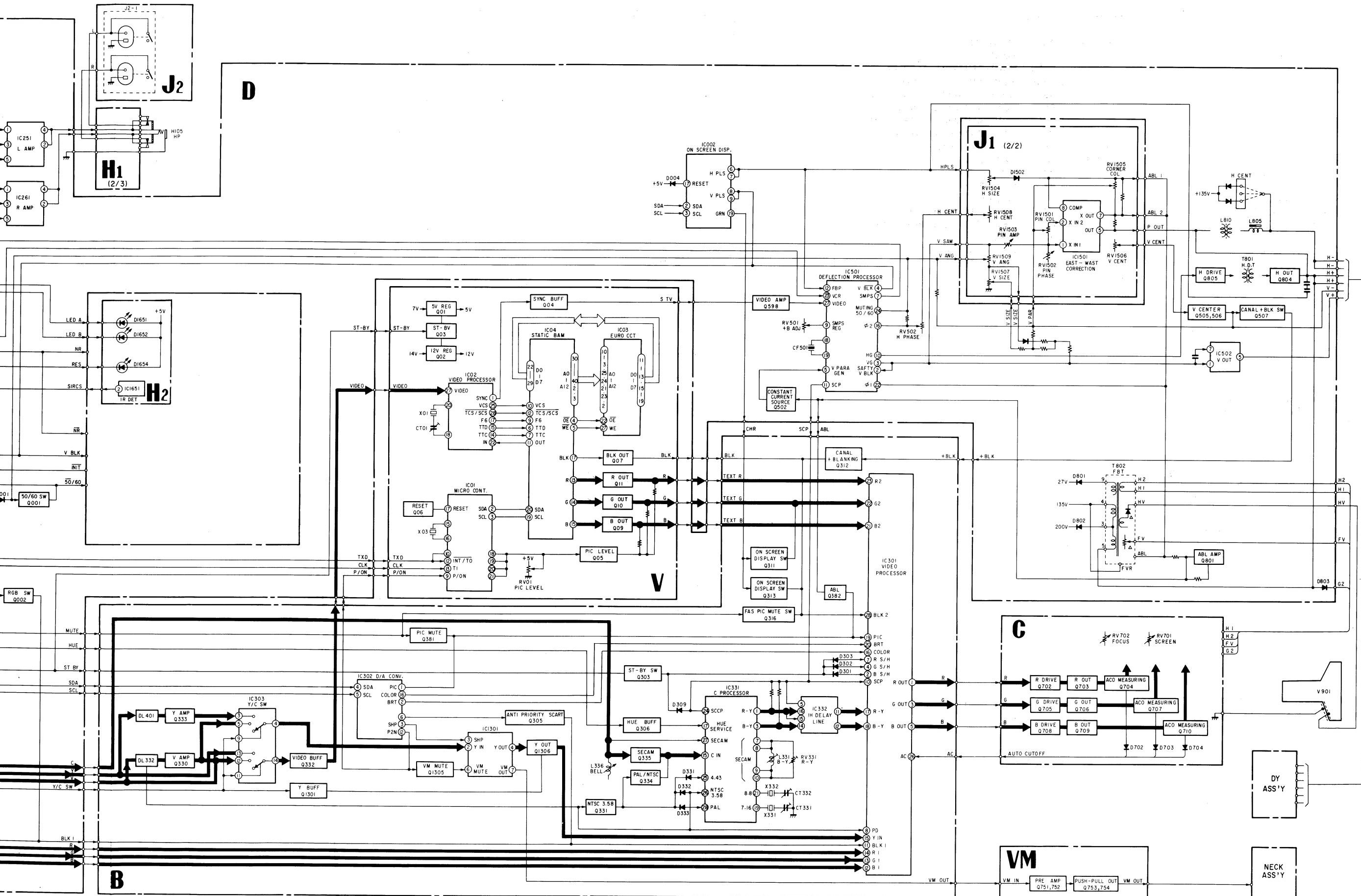


MEMO

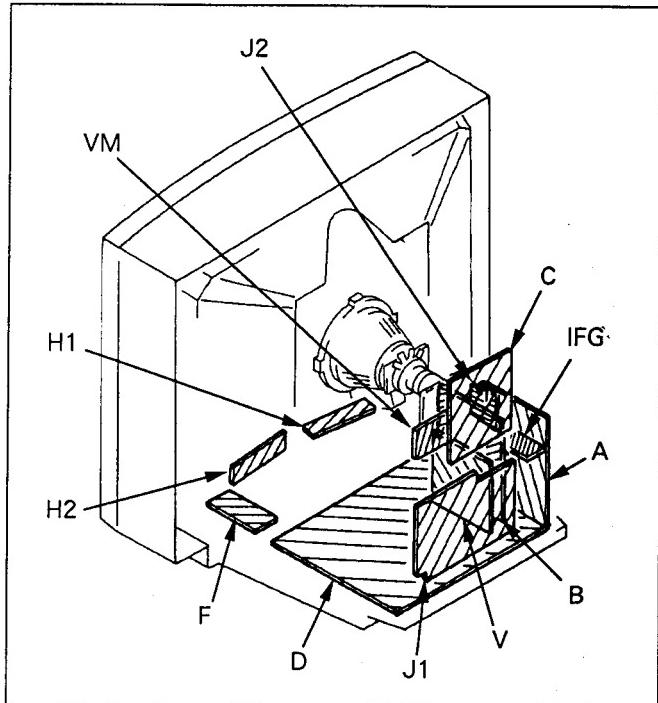
SECTION 5 DIAGRAMS

5-1. BLOCK DIAGRAM





5-2. CIRCUIT BOARDS LOCATION



Reference information

RESISTOR	:	RN	METAL FILM
	:	RC	SOLID
	:	FPRD	NONFLAMMABLE CARBON
	:	FUSE	NONFLAMMABLE FUSIBLE
	:	RS	NONFLAMMABLE METAL OXIDE
	:	RB	NONFLAMMABLE CEMENT
	:	RW	NONFLAMMABLE WIREWOUND
	:	♦	ADJUSTMENT RESISTOR
COIL	:	LF-8L	MICRO INDUCTOR
CAPACITOR	:	TA	TANTALUM
	:	PS	STYROL
	:	PP	POLYPROPYLENE
	:	PT	MYLAR
	:	MPS	METALIZED POLYESTER
	:	MPP	METALIZED POLYPROPYLENE
	:	ALB	BIPOLAR
	:	ALT	HIGH TEMPERATURE
	:	ALR	HIGH RIPPLE

Note: The components identified by shading and mark are critical for safety. Replace only with part number specified.

Note :

- All capacitors are in μF unless otherwise noted.
 $\mu\text{F} : \mu\mu\text{F}$ 50WV or less are not indicated except for electrolytics.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5mm

Rating electrical power : 1/4W

- Chip resistor is in 1/10W.
- All resistors are in ohms. $\text{k}\Omega = 1000\Omega$, $\text{M}\Omega = 1000\text{k}\Omega$
- : nonflammable resistor.
- : fusible resistor.
- Δ : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B.unless otherwise noted.
- All voltages are in V.
- Readings are taken with a $10\text{M}\Omega$ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- : B + line.
- : signal path.

1

CONTROL SW.
AV INPUT,
HEADPHONE

H2

SIRCS RECEIVER, INDICATOR

F

[AC IN,
POWER SW]

[SPEAKER]
[TERMINAL]

J2

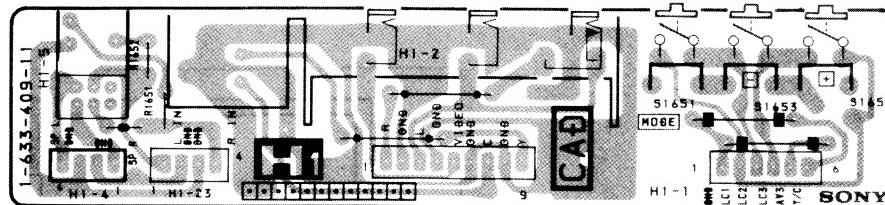
[TUNER,
SIF, VIF] A

J1

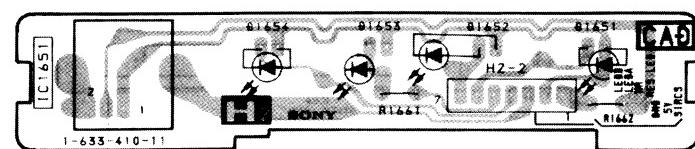
5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

-Conductor Side-

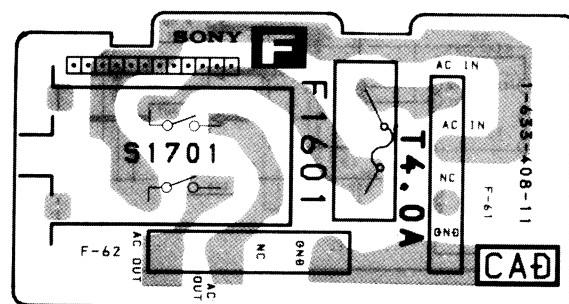
-H1 Board-



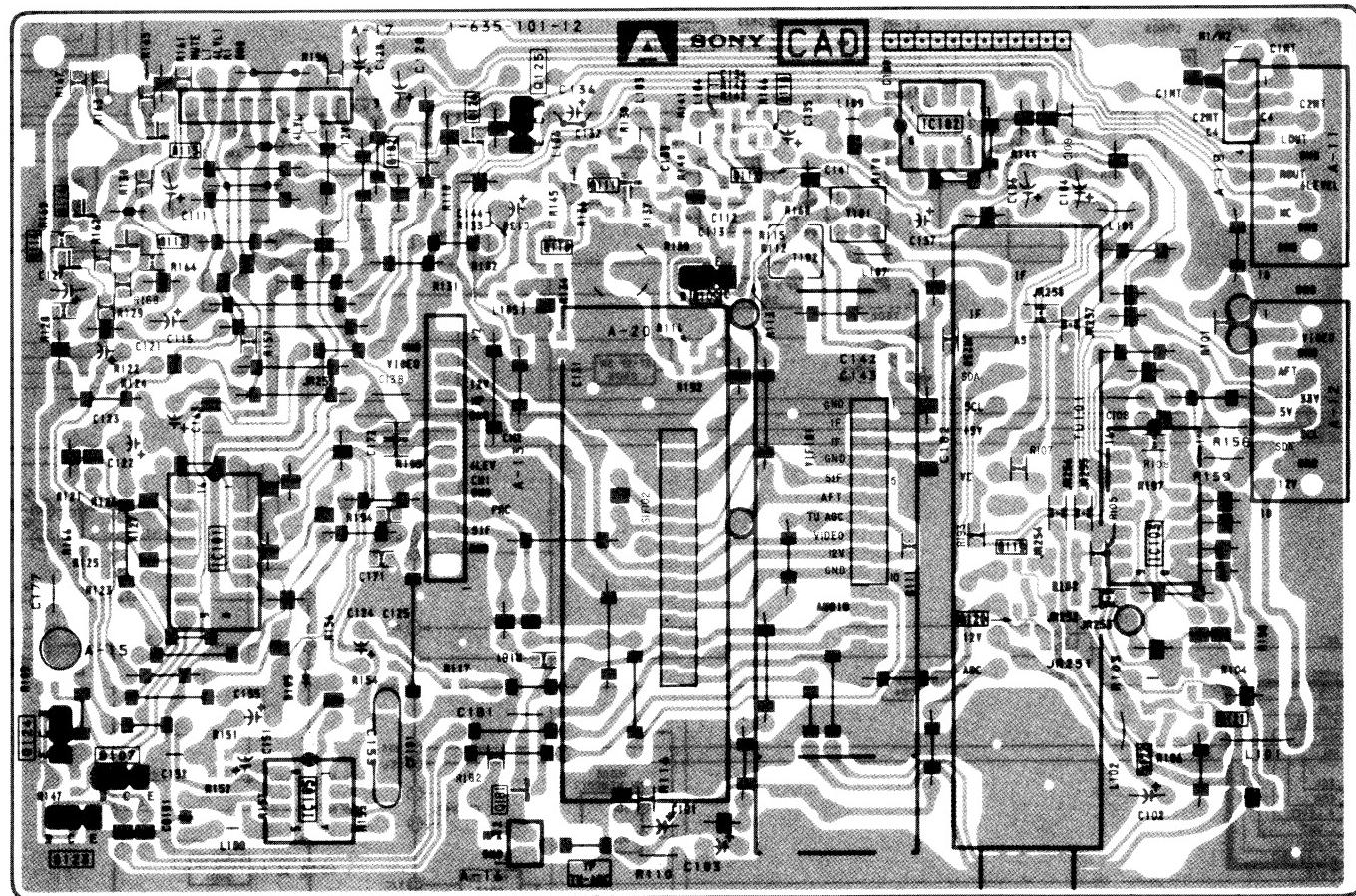
- H2 Board -



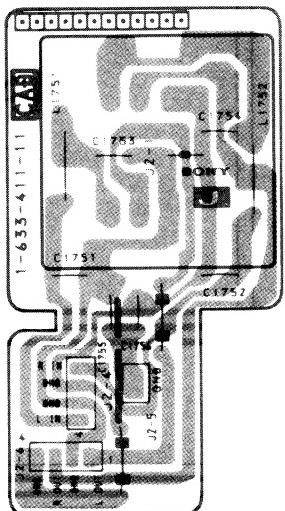
- F Board -



- A Board -



— J2 Board —



[SPEAKER
TERMINAL]

J2

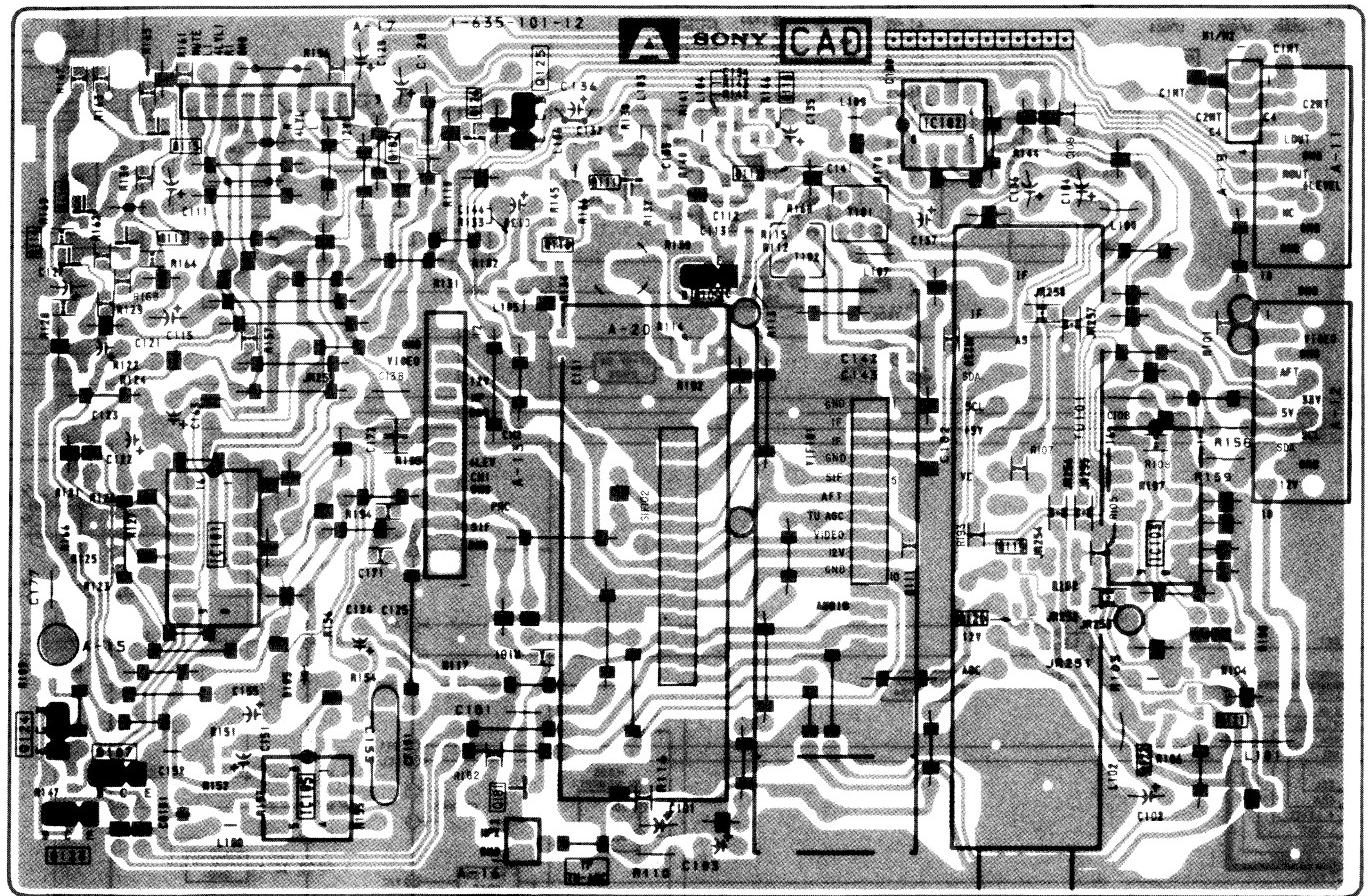
[TUNER,
SIF, VIF]

A

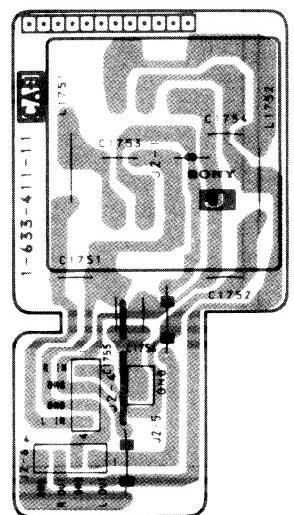
J1

AUDIO CONTROL, AV INPUT,
Y/C INPUT, SCART VIDEO OUT,
EAST-WEST CORRECTION

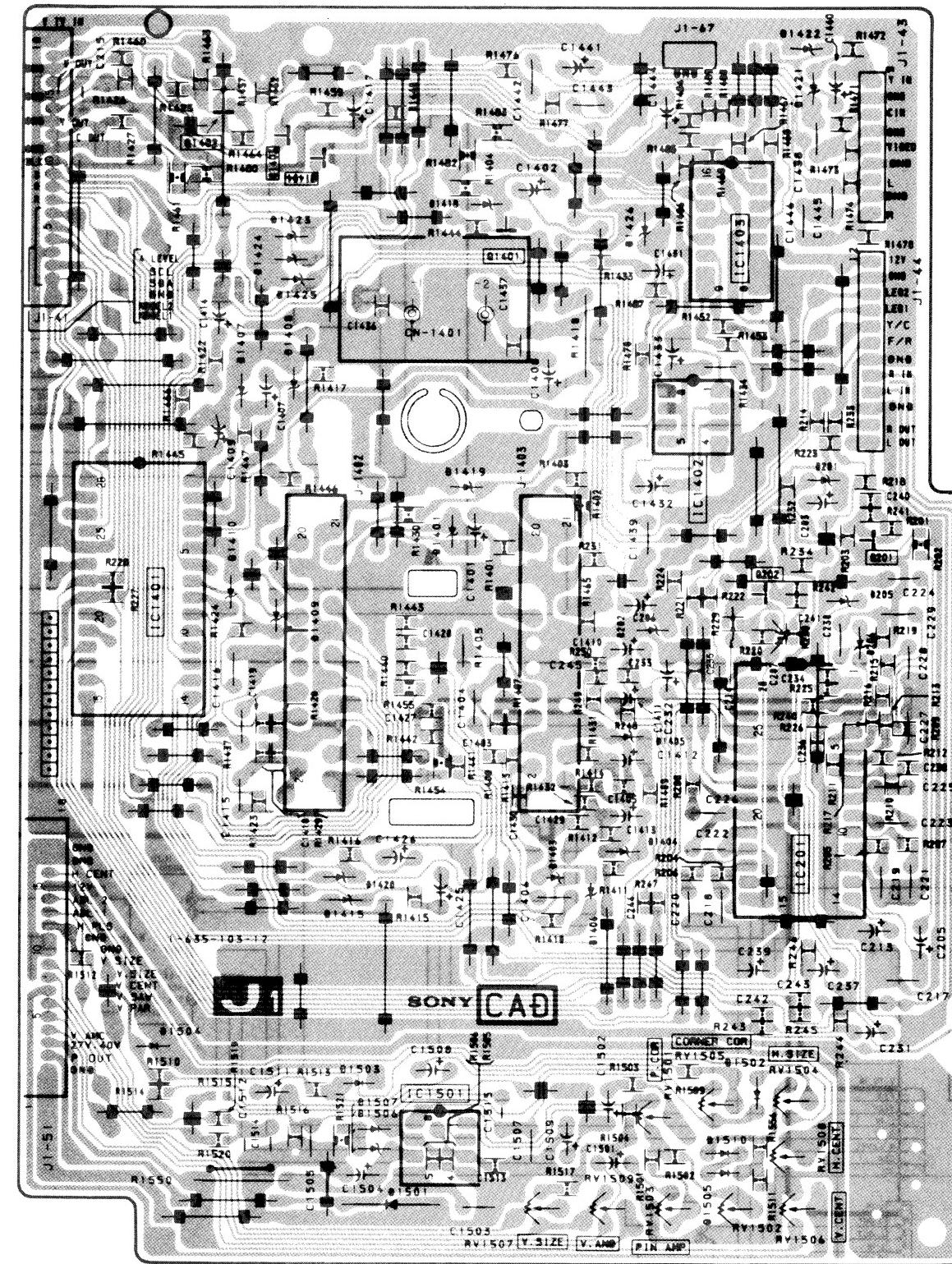
-A Board-

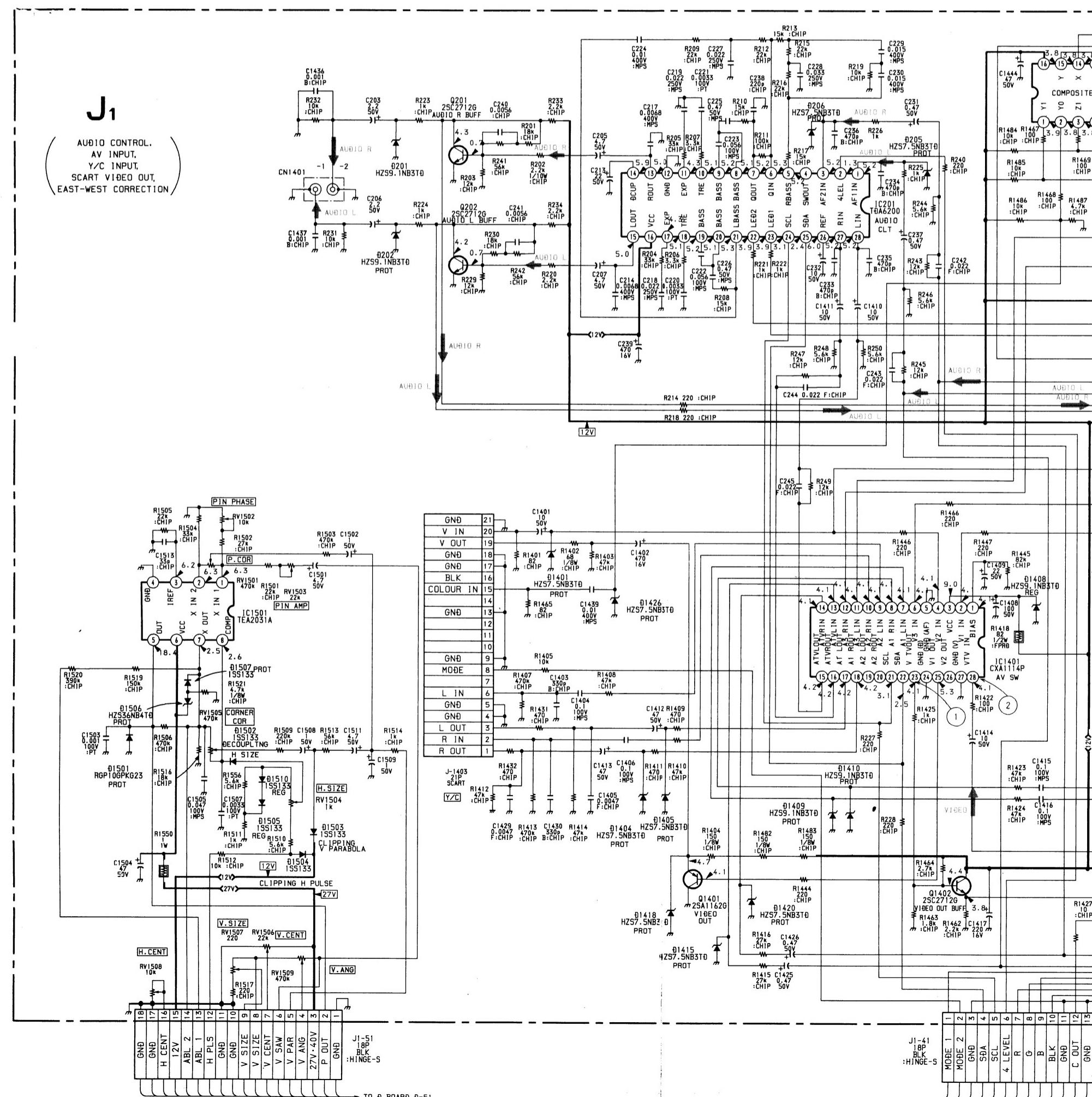
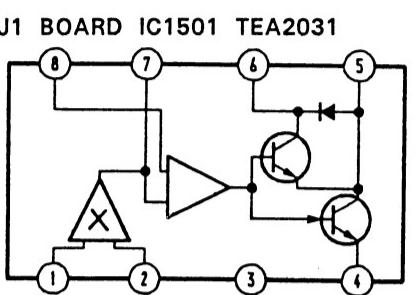
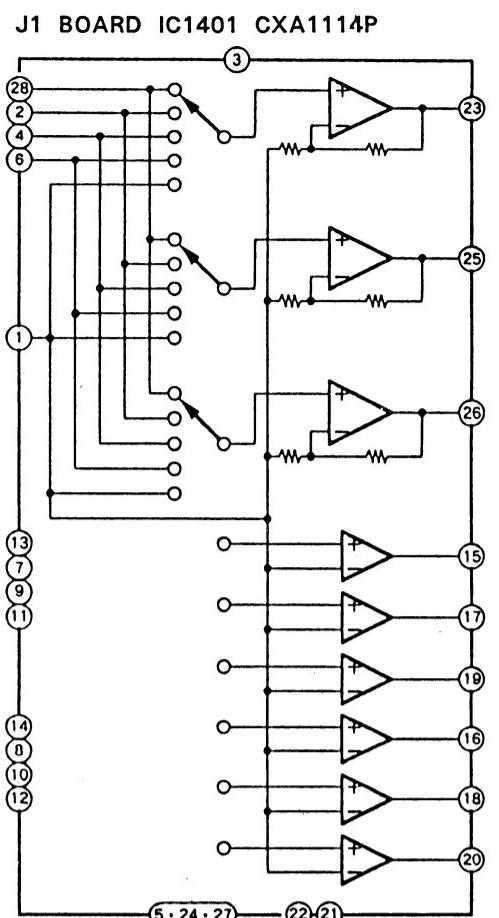
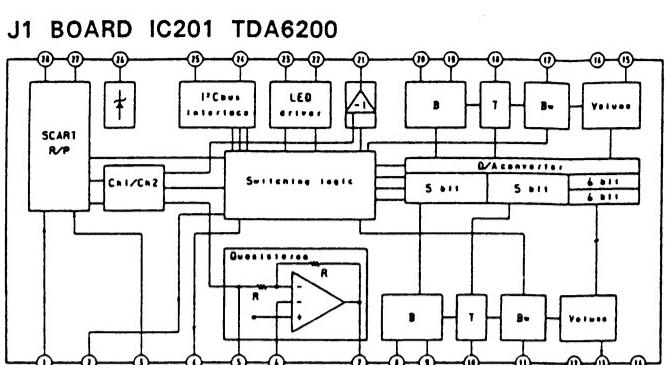
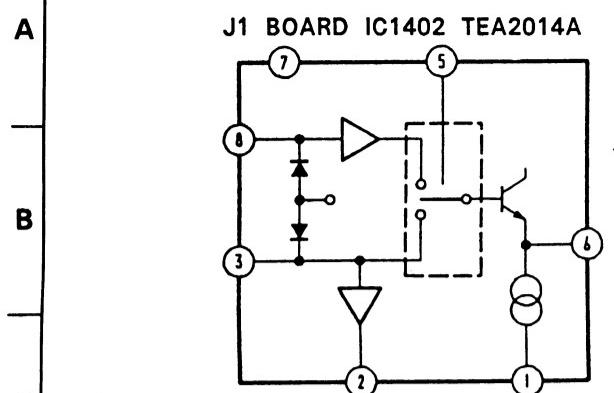


-J2 Board-

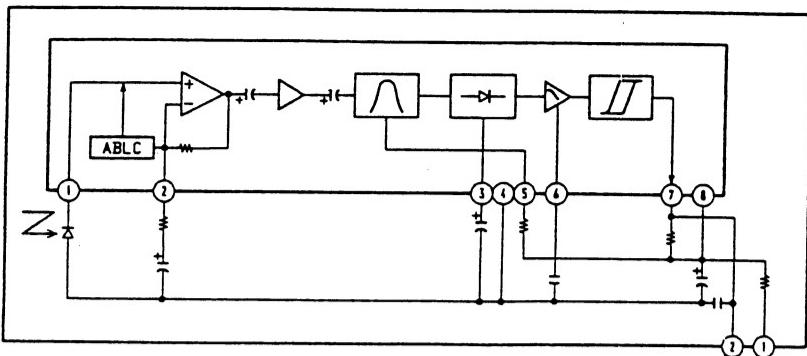


-J1 Board-

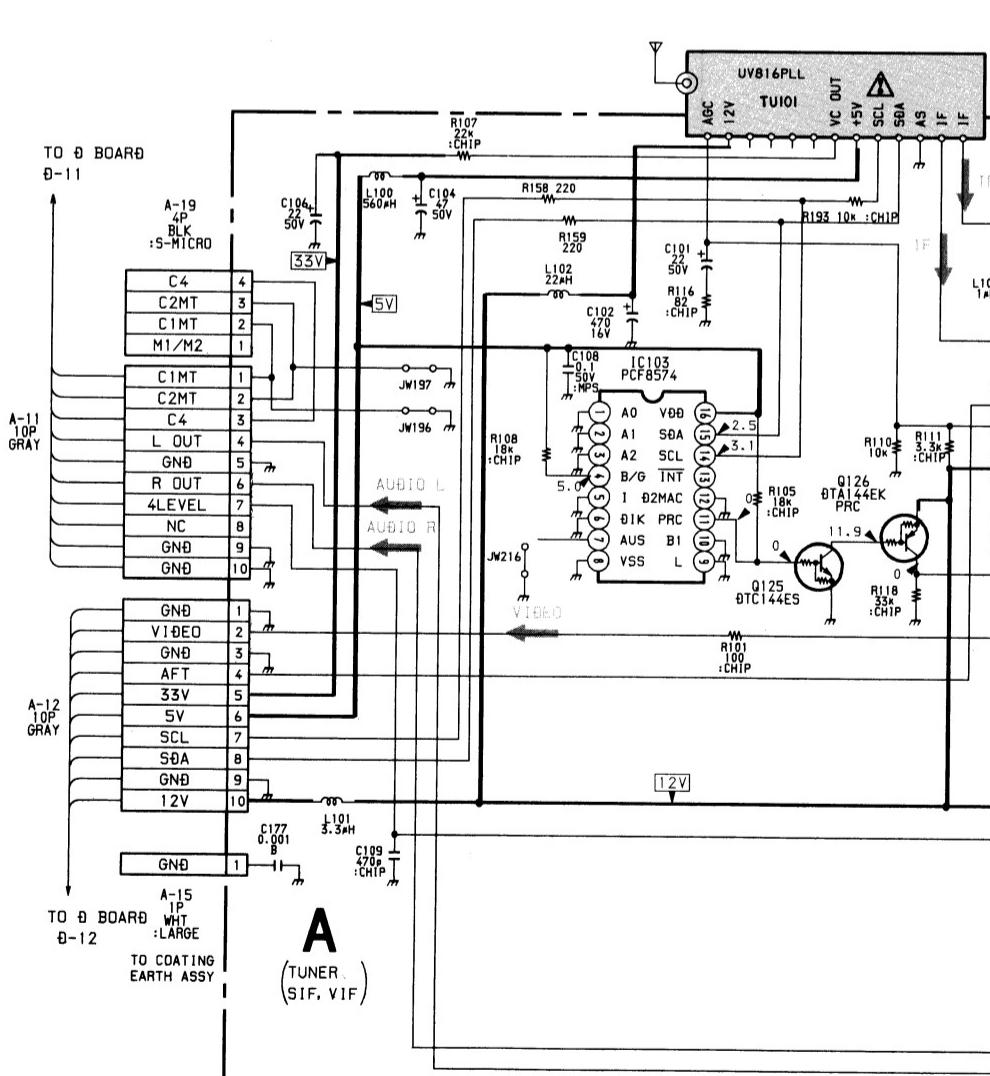
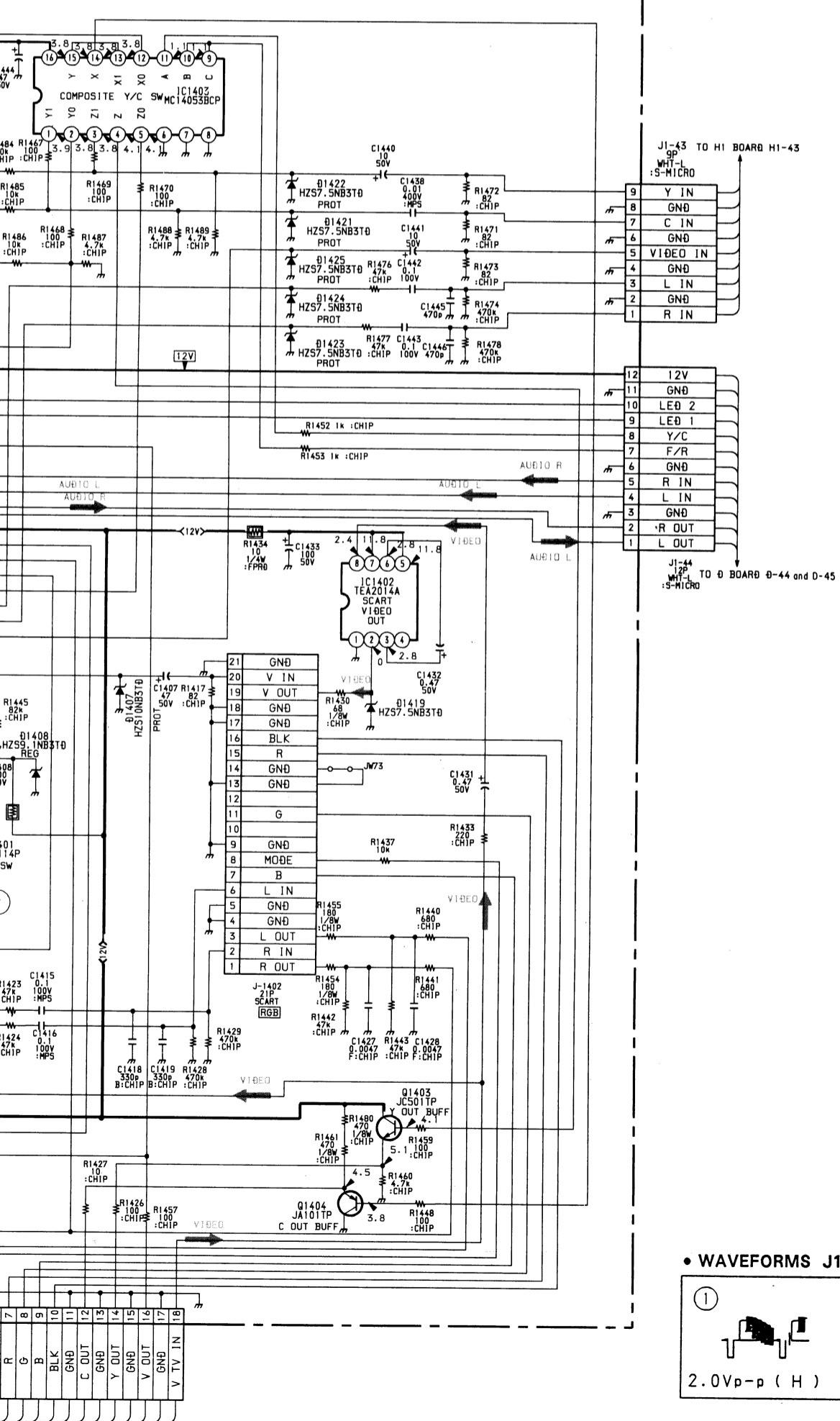
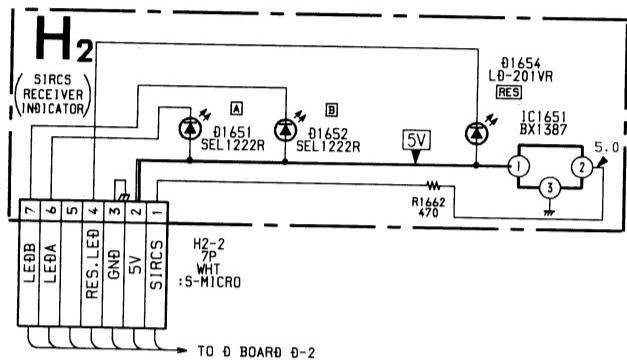
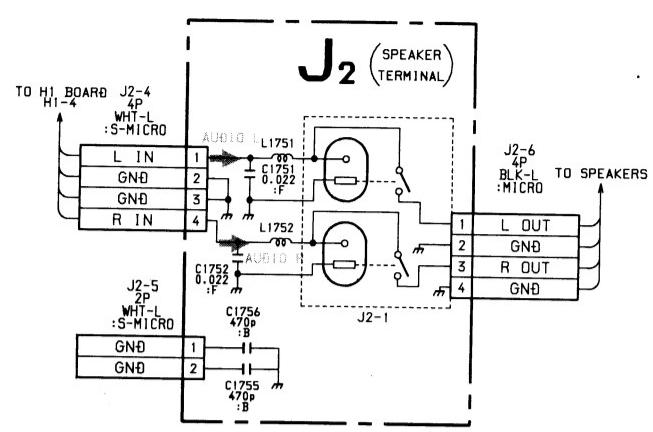
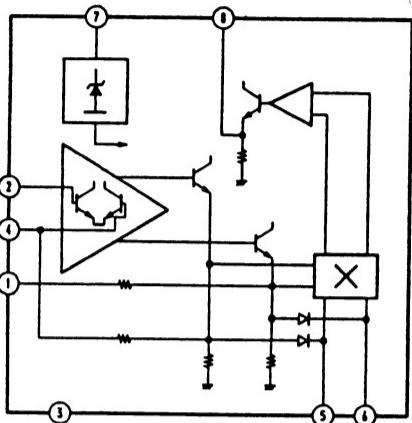




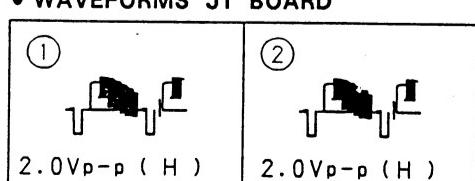
H2 BOARD IC1651 BA1387



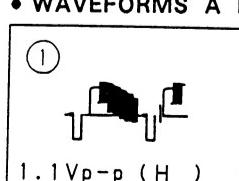
A BOARD IC105 TBA129

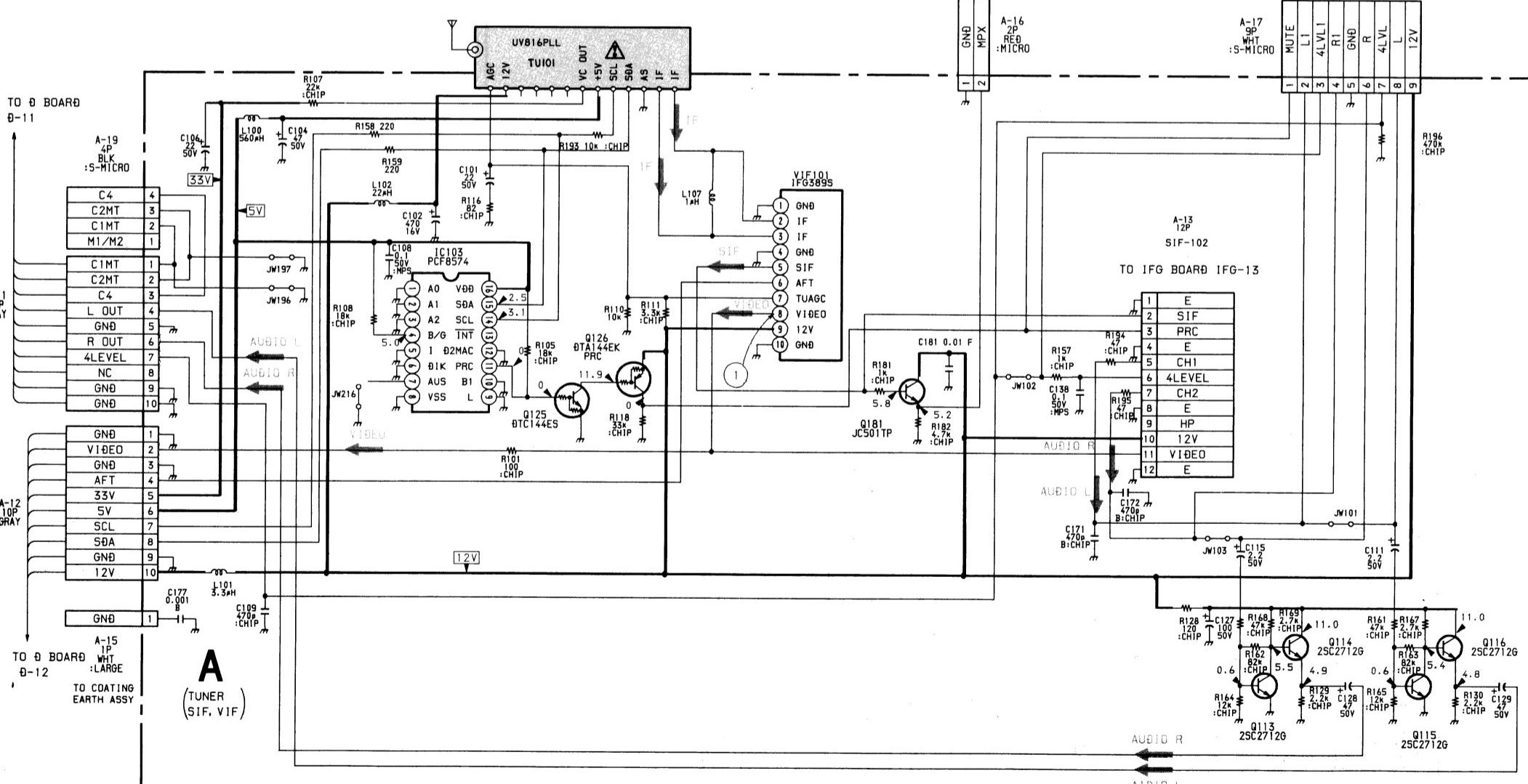
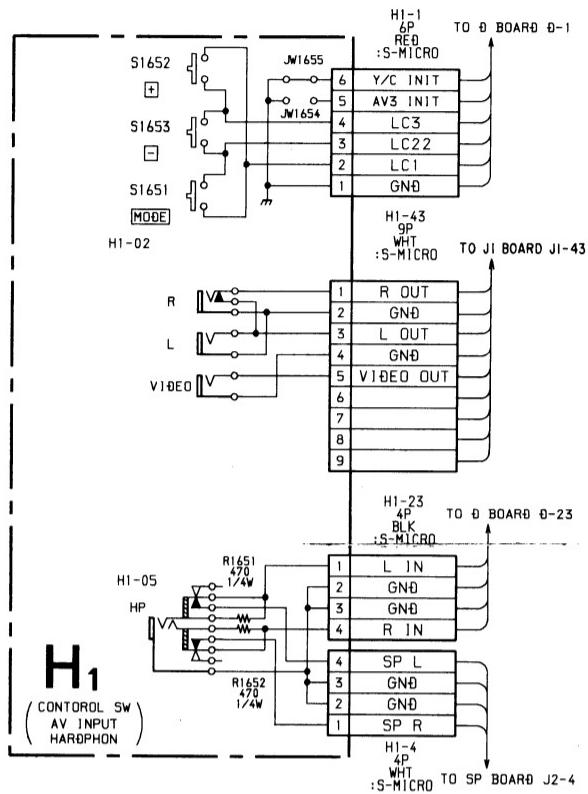
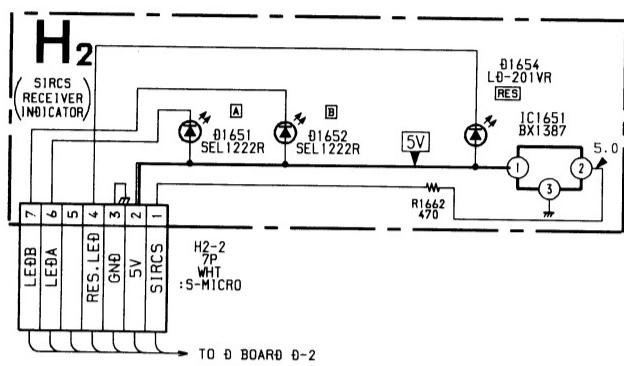
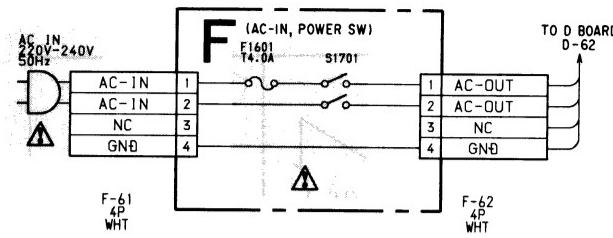
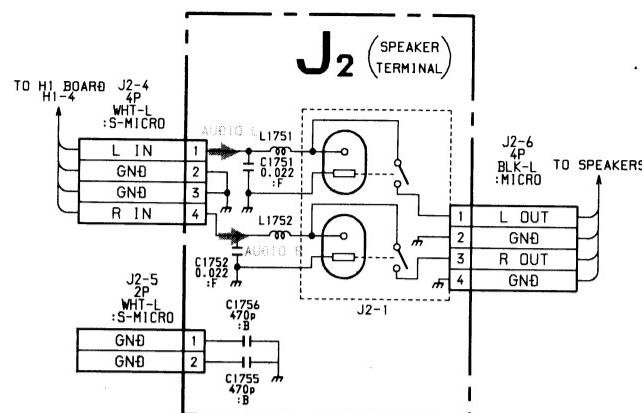


• WAVEFORMS J1 BOARD

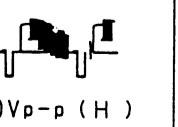
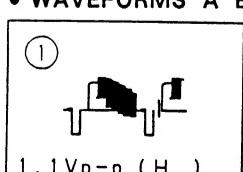


• WAVEFORMS A BOARD

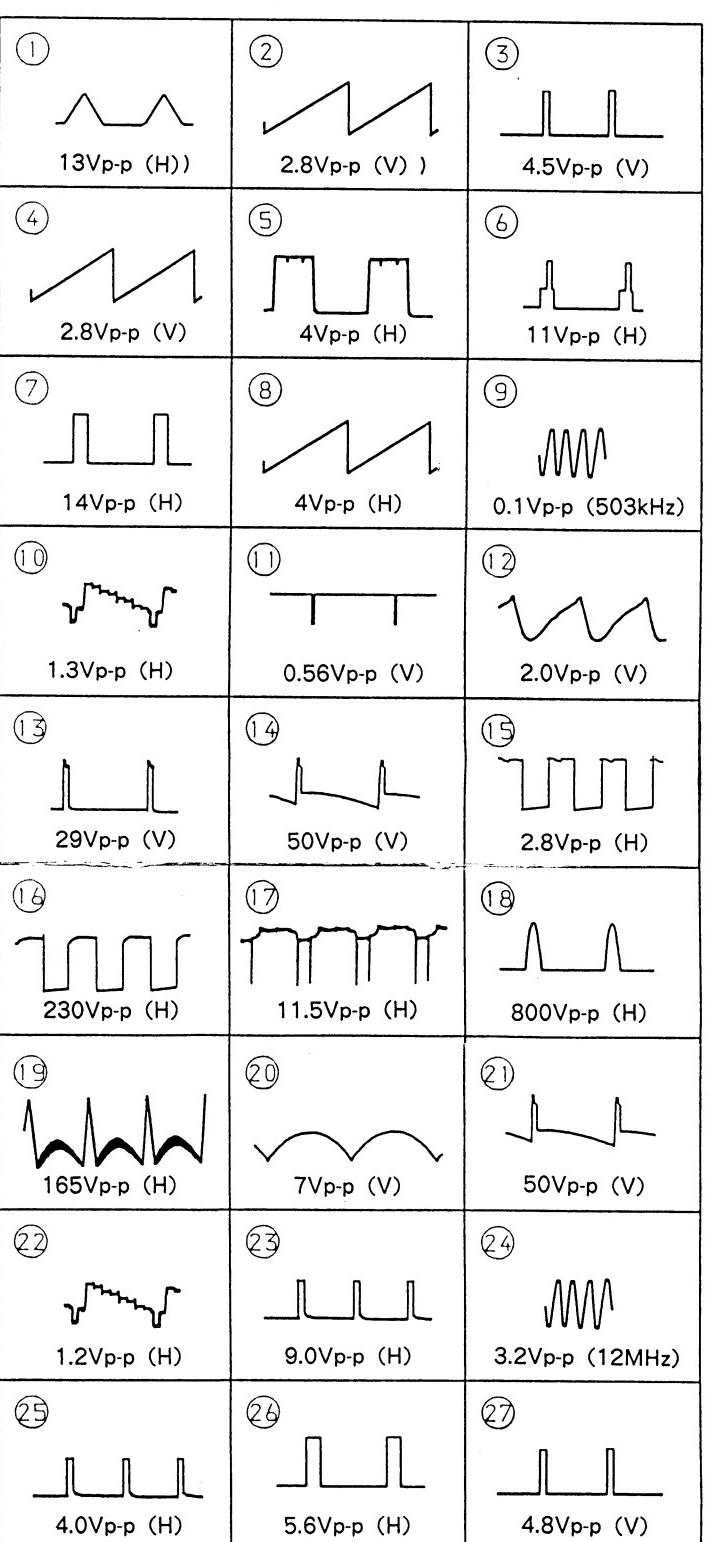




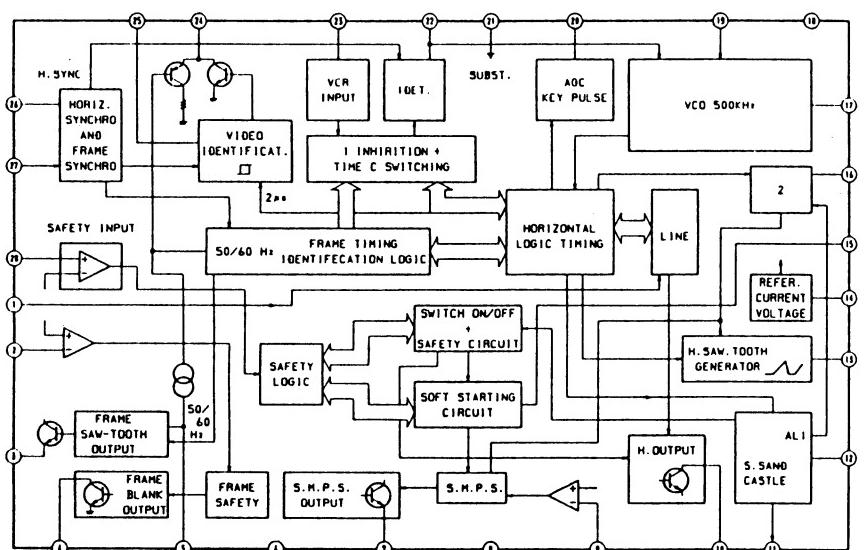
• WAVEFORMS A BOARD



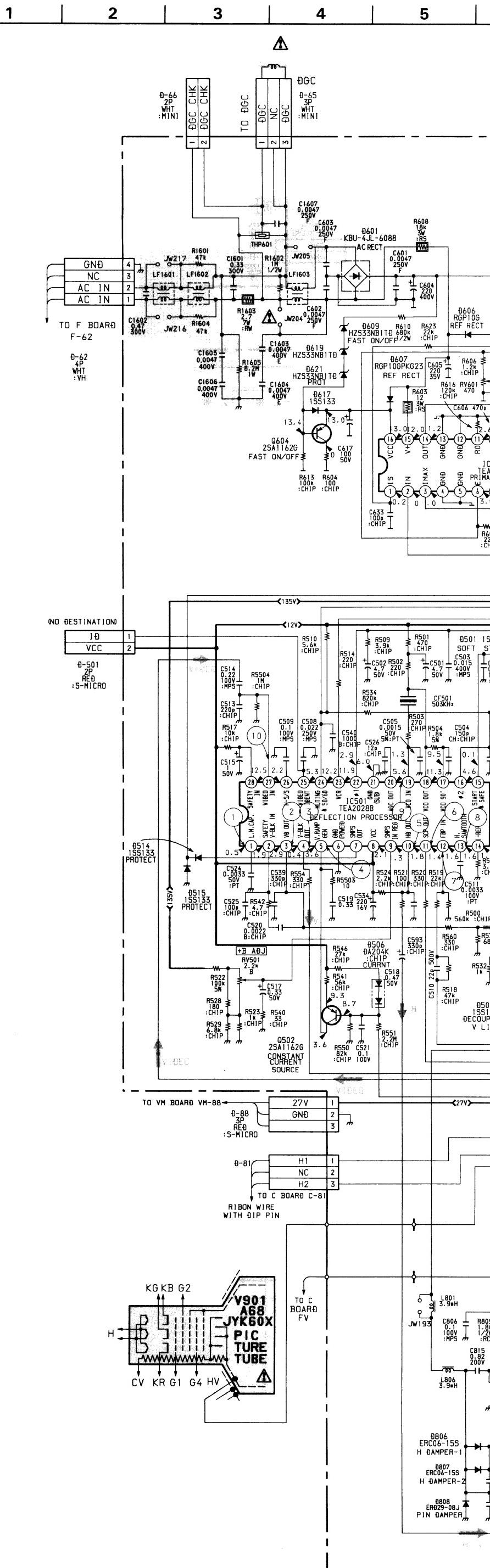
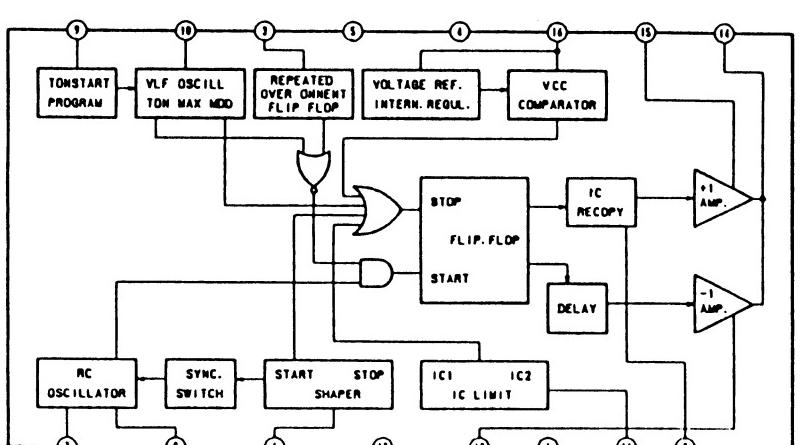
• WAVEFORMS D BOARD

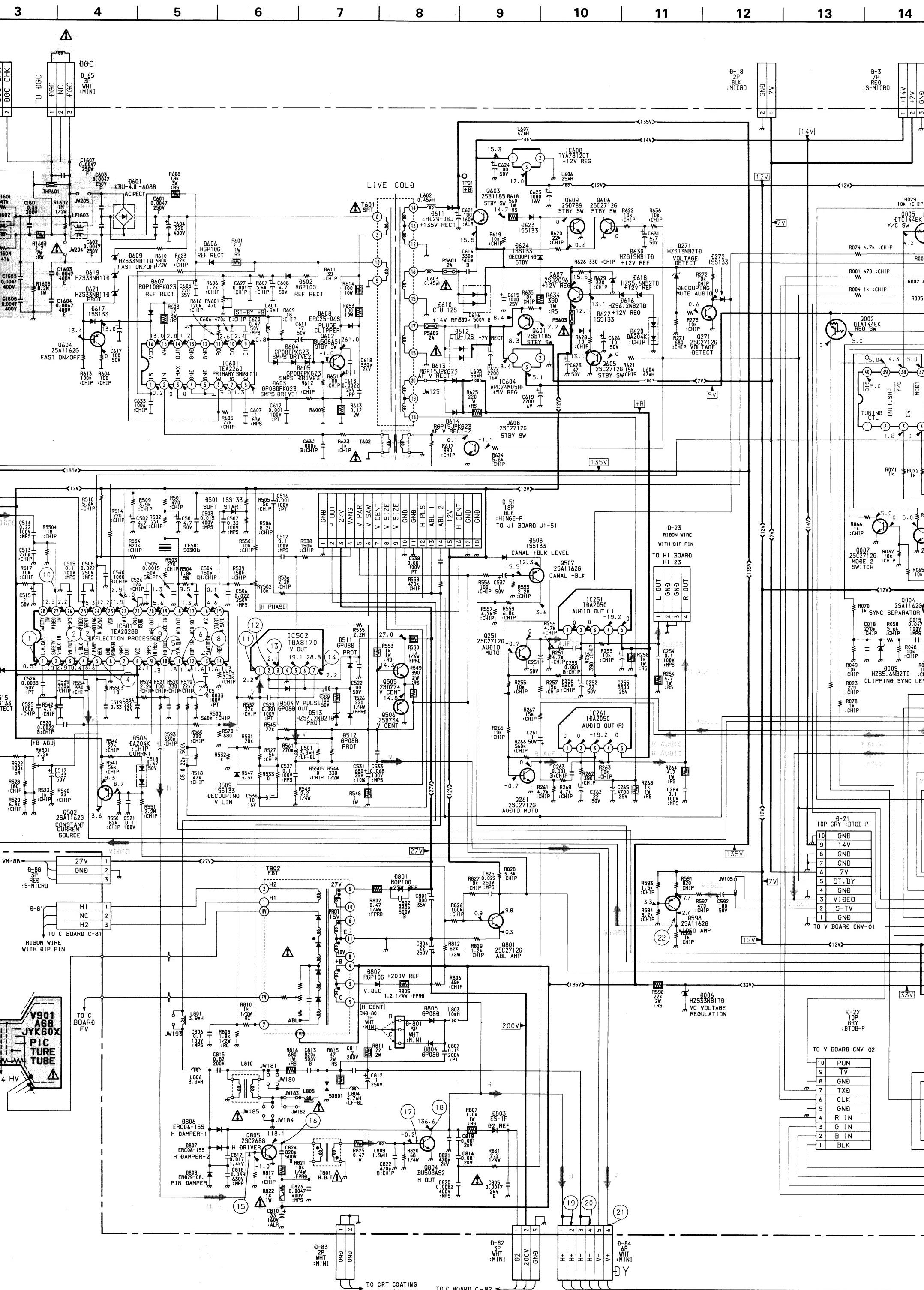


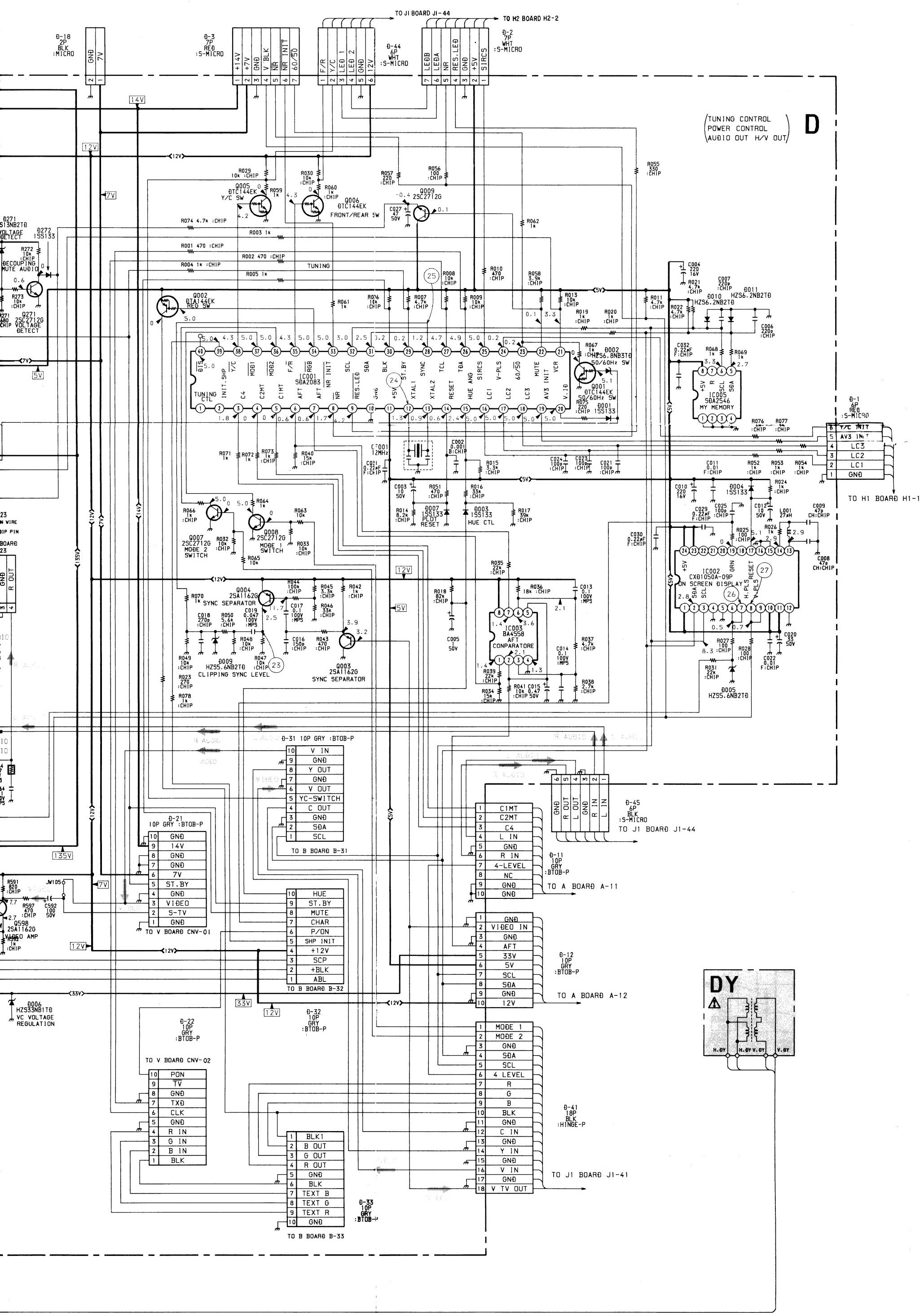
D BOARD IC501 TEA2028B



D BOARD IC601 TEA2260







A

B

C

D

E

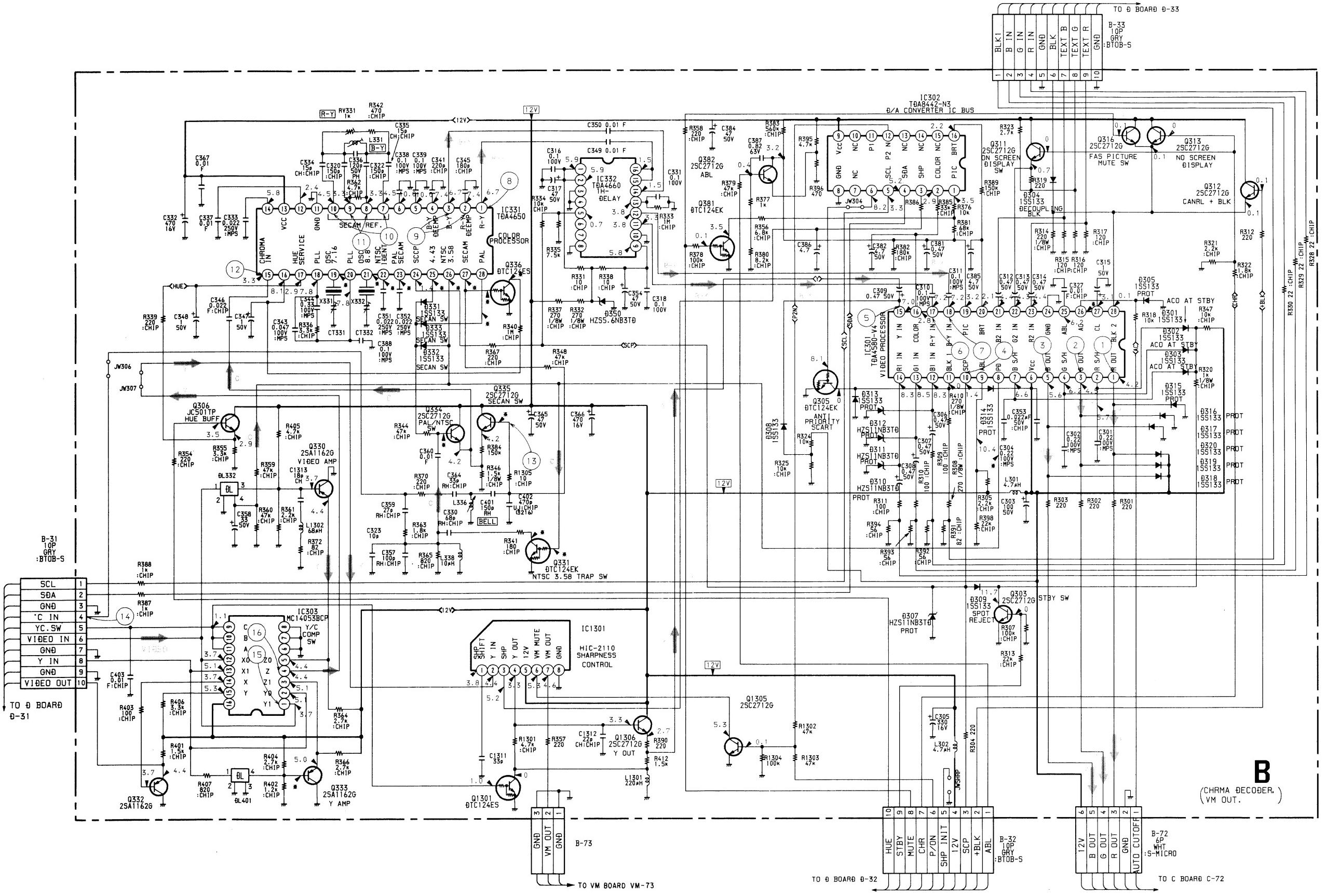
5

2

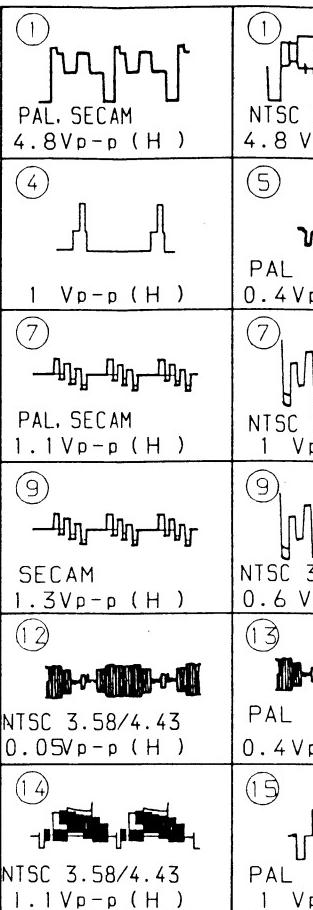
4

1

1



- WAVEFORMS B BOARD



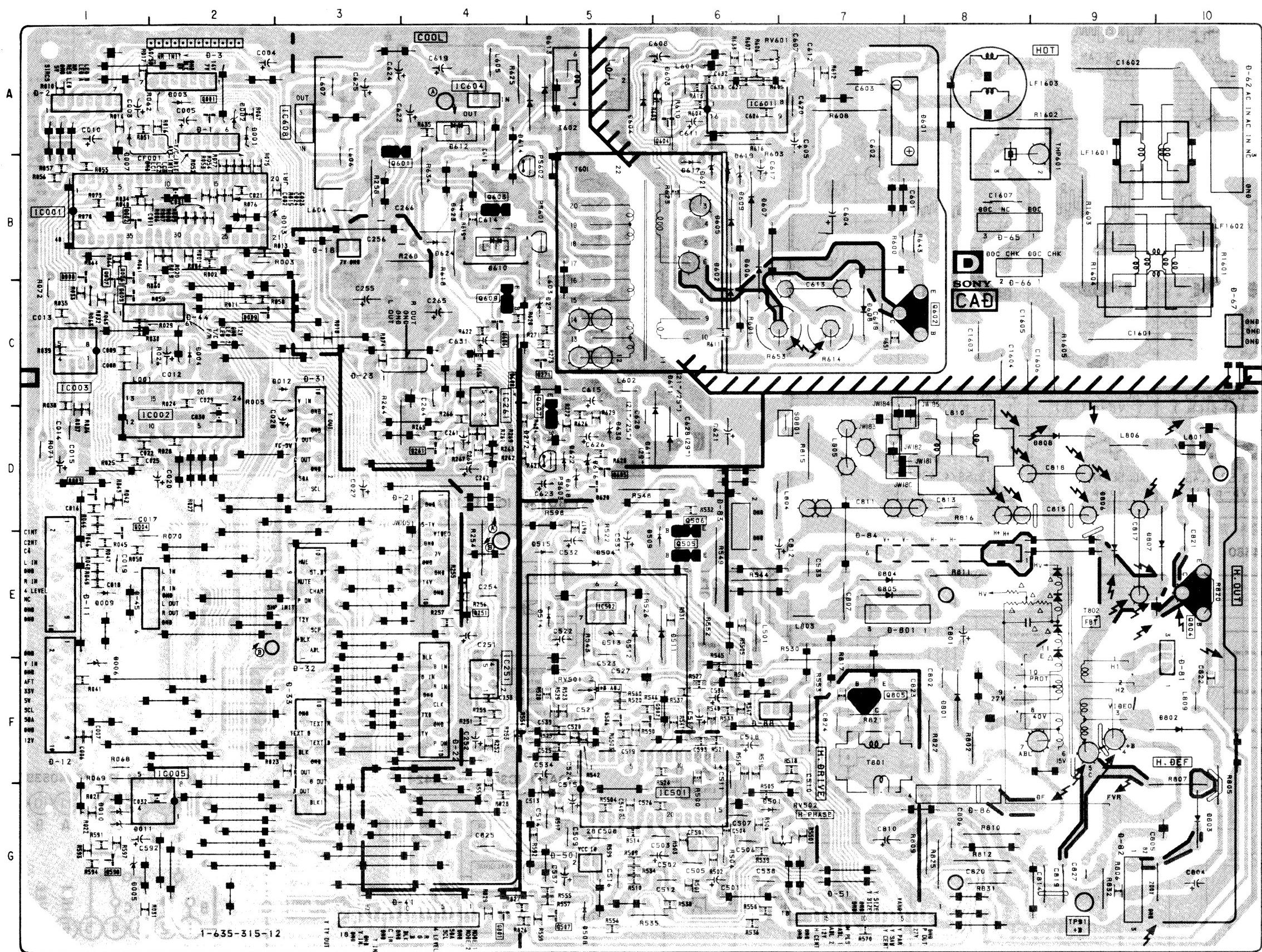
As to the voltage value shown by mark \times on the Schematic Diagram the another list.

	PAL	SECAM	NTSC3.58	NTSC4.43
C301 (B)	0.1	0.1	5.8	0.1
	6.7	6.8	5.1	5.1
C331 (B)	3.1	3.6	3.1	2.8
	3.0	3.5	2.9	2.7
(C)	5.6	5.6	7.1	7.2
	7.5	7.0	5.6	5.6
(D)	0.1	0.1	0.1	5.8
	0.1	0.1	5.8	0.1
(E)	0.1	5.8	0.1	0.1
	5.9	0.1	0.1	0.1
Q331 (B)	0.1	0.1	5.8	0.1
	1.5	1.9	0	0.8
Q333 (B)	3.4	4.4	4.4	4.4
	4.9	0.1	4.8	4.8
Q335 (B)	0.1	4.8	0.1	0.1
	0.1	5.8	0.1	0.1
(C)	7.3	0	7.3	7.3

[TUNING CONTROL,
POWER CONTROL,
AUDIO OUT, H/V OUT]

D D

-D Board-



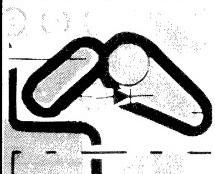
IC	
D007	A-1
D009	E-1
D010	G-1
D011	C-5
D271	D-5
D272	G-6
IC005	G-2
IC251	F-4
IC261	C-4
IC501	G-6
IC502	E-5
IC601	A-6
IC604	A-4
IC608	A-3
TRANSISTOR	
Q001	A-2
Q002	B-1
Q003	D-1
Q004	D-1
Q005	C-1
Q006	B-1
Q007	C-1
Q008	C-1
Q009	C-2
Q251	E-4
Q261	D-4
Q271	C-5
Q502	F-6
Q505	E-6
Q506	E-6
Q507	G-5
Q598	G-1
Q601	B-4
Q602	C-8
Q603	B-4
Q604	A-6
Q605	D-5
Q606	C-4
Q607	D-5
Q608	F-8
Q609	C-4
Q801	G-4
Q804	E-10
Q805	F-7
DIODE	
D001	A-2
D002	A-2
D003	A-2
D004	C-2
D005	G-1
D006	F-1
VARIABLE RESISTOR	
RV501	F-5
RV502	G-7
RV601	A-6

D

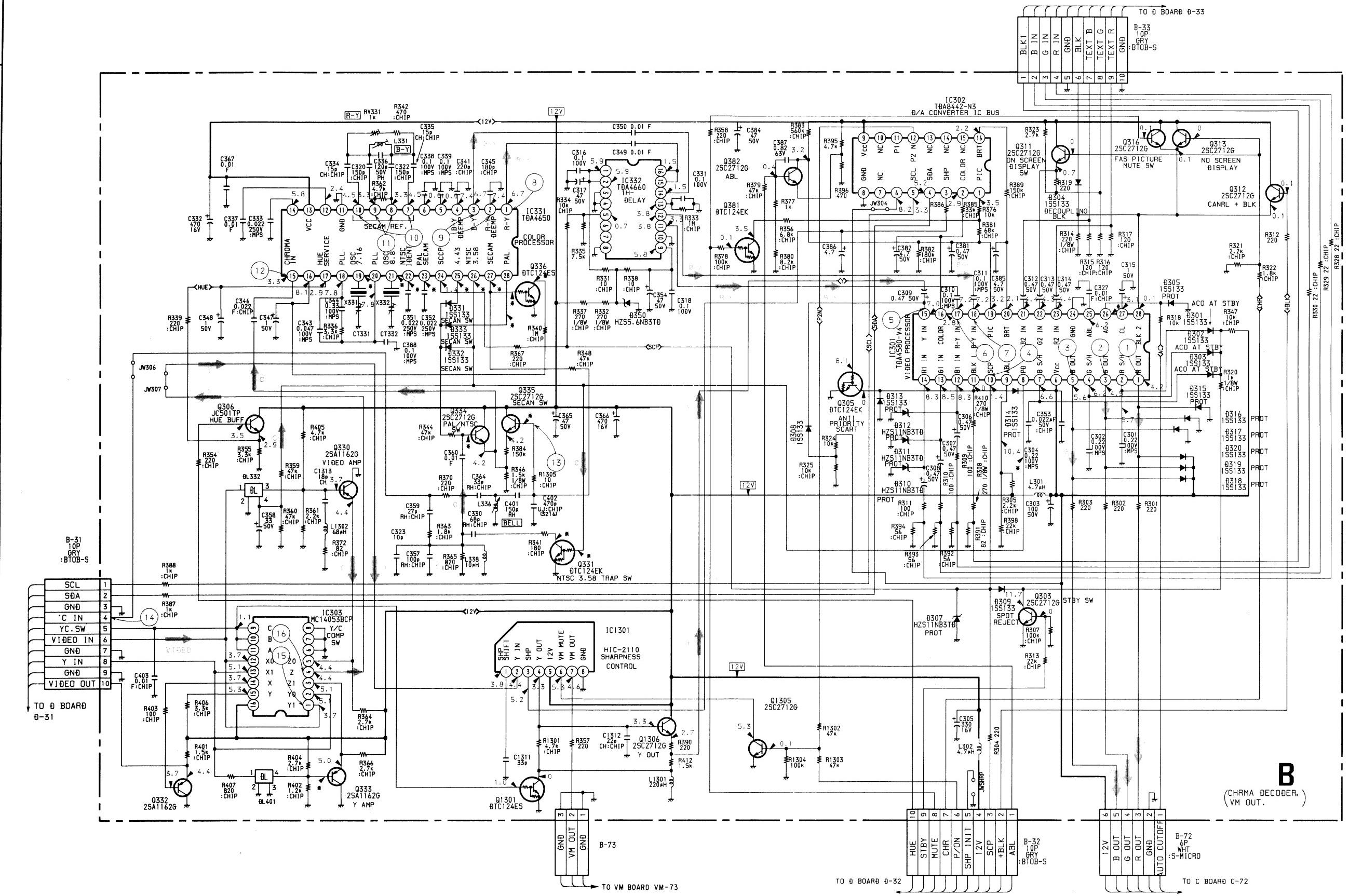
07	A-1
09	E-1
10	G-1
11	G-1
71	C-5
72	D-5
01	G-6
04	E-5
06	E-6
08	G-5
09	D-6
11	E-6
12	E-5
13	E-5
14	E-5
15	E-5
01	A-8
02	C-6
03	A-6
04	A-5
05	B-6
06	B-6
07	B-6
08	C-7
09	B-6
10	B-4
11	D-6
12	A-4
13	A-5
14	A-5
16	D-5
17	B-6
18	D-5
19	B-6
20	D-5
21	B-6
22	D-5
23	B-4
24	B-4
30	D-5
01	F-8
02	F-10
03	G-10
04	E-7
05	E-7
06	E-9
07	E-10
08	D-9

**VARIABLE
RESISTOR**

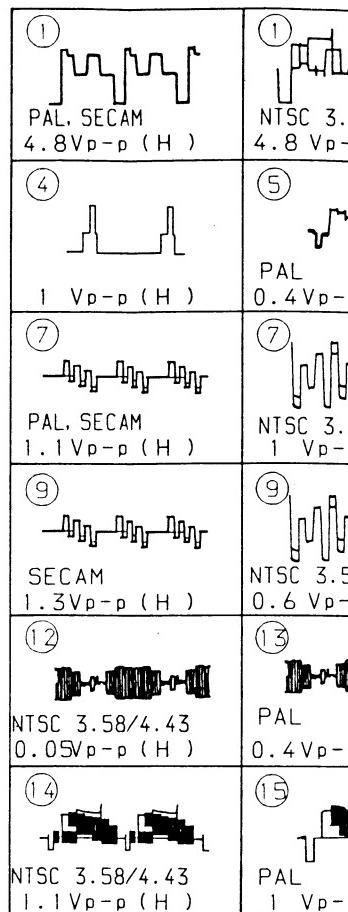
501	F-5
502	G-7
601	A-6

**NOTE:**

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.



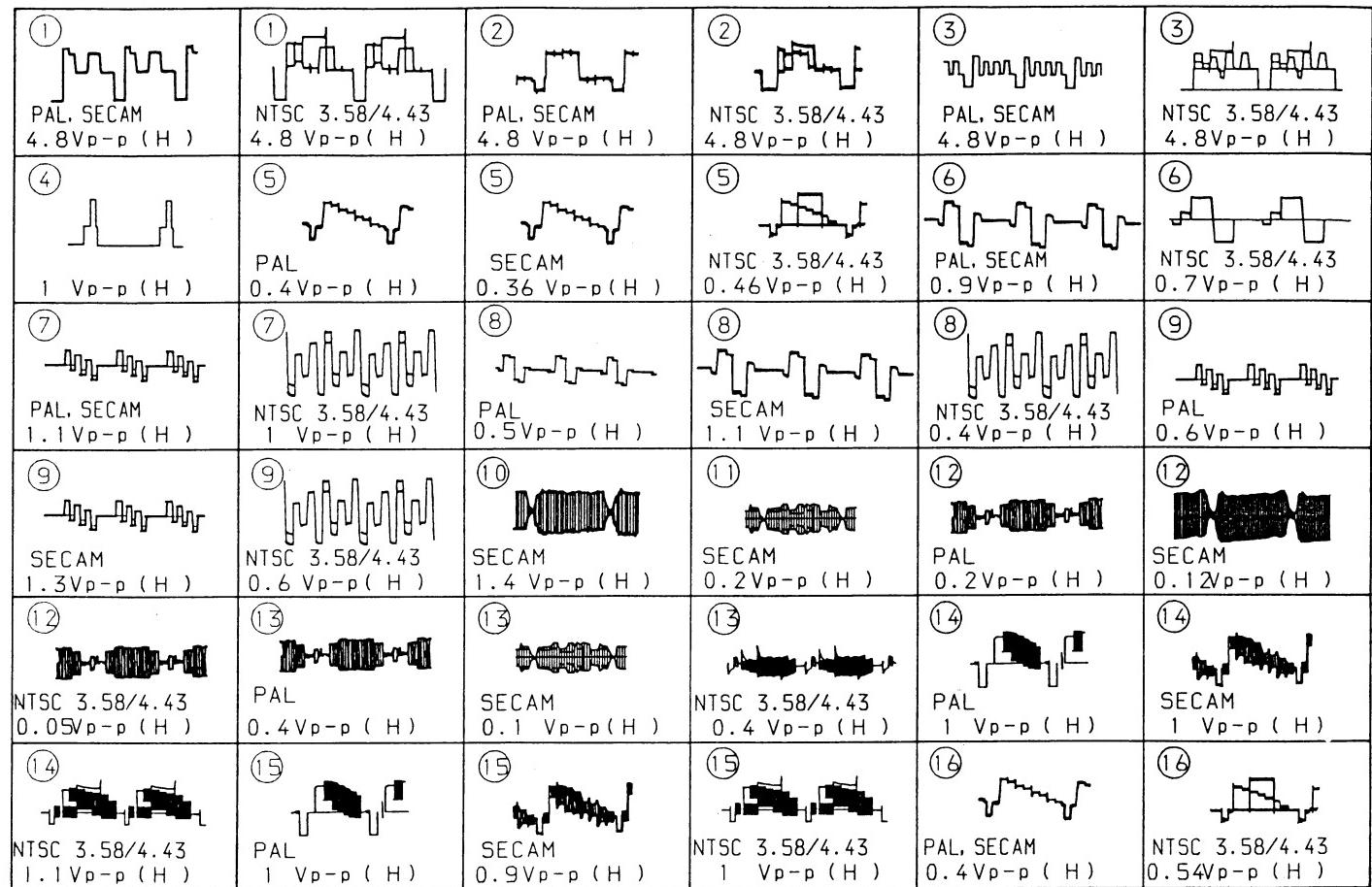
- WAVEFORMS B BOARD



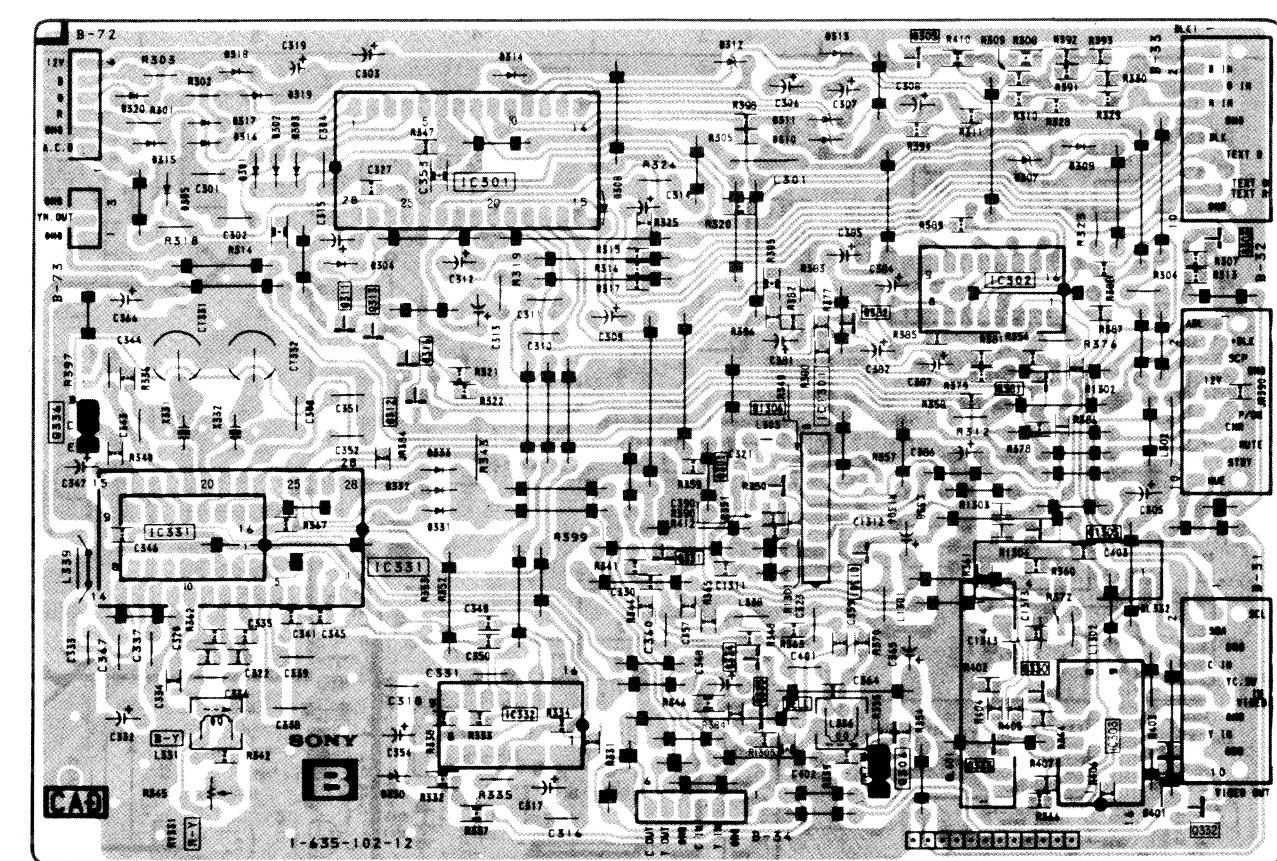
As to the voltage value shown by mark \times on the Schematic Diagram, the another list.

	PAL	SECAM	NTSC3.58	NTSC4.43
I C301 (1)	0.1	0.1	5.8	0.1
(26)	6.7	6.8	5.1	5.1
I C331 (13)	3.1	3.6	3.1	2.8
(21)	3.0	3.5	2.9	2.7
(22)	5.6	5.6	7.1	7.2
(23)	7.5	7.0	5.6	5.6
(25)	0.1	0.1	0.1	5.8
(26)	0.1	0.1	5.8	0.1
(27)	0.1	5.8	0.1	0.1
(28)	5.9	0.1	0.1	0.1
Q331 (B)	0.1	0.1	5.8	0.1
(C)	1.5	1.9	0	0.8
Q333 (B)	3.4	4.4	4.4	4.4
Q334 (B)	4.9	0.1	4.8	4.8
Q335 (B)	0.1	4.8	0.1	0.1
Q336 (B)	0.1	5.8	0.1	0.1
(C)	7.3	0	7.3	7.3

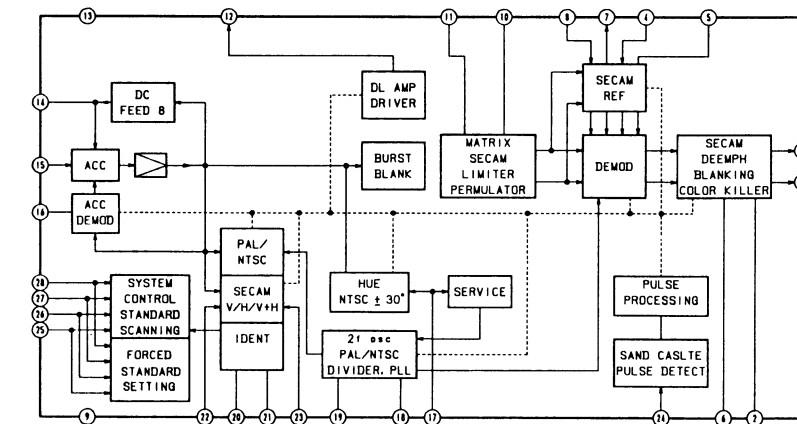
• WAVEFORMS B BOARD



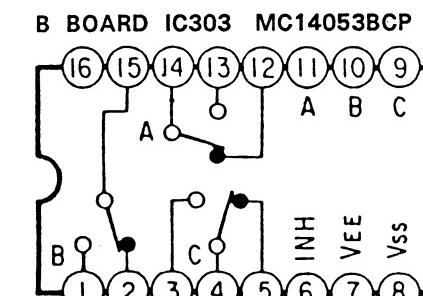
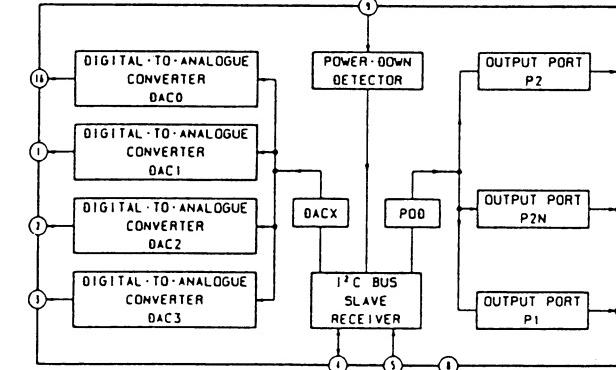
-B Board-



• B BOARD IC331 TDA4650

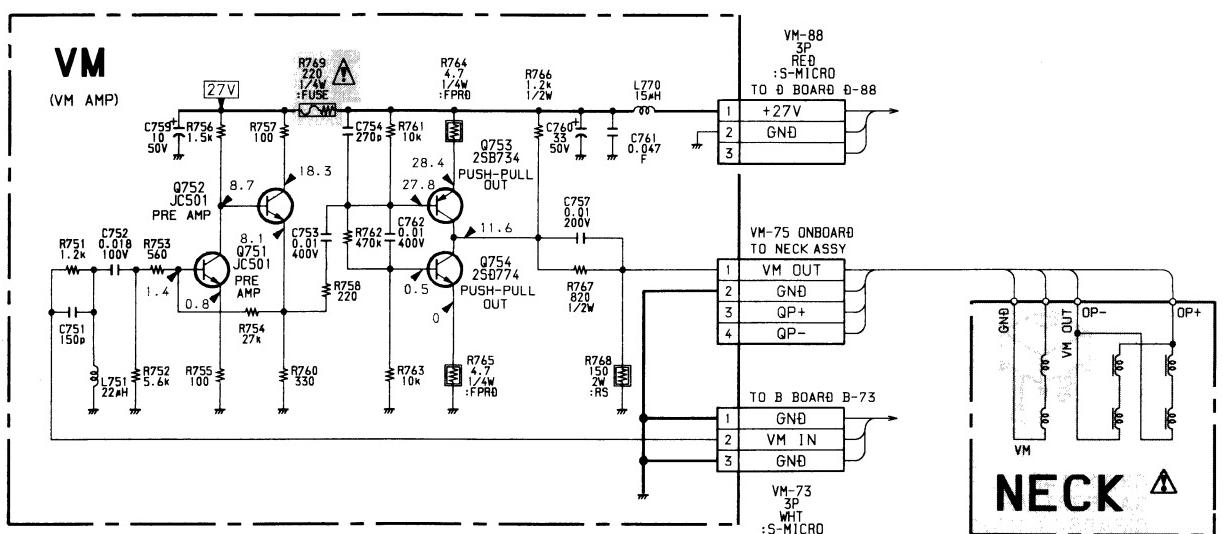


• B BOARD IC302 TDA8442-N3

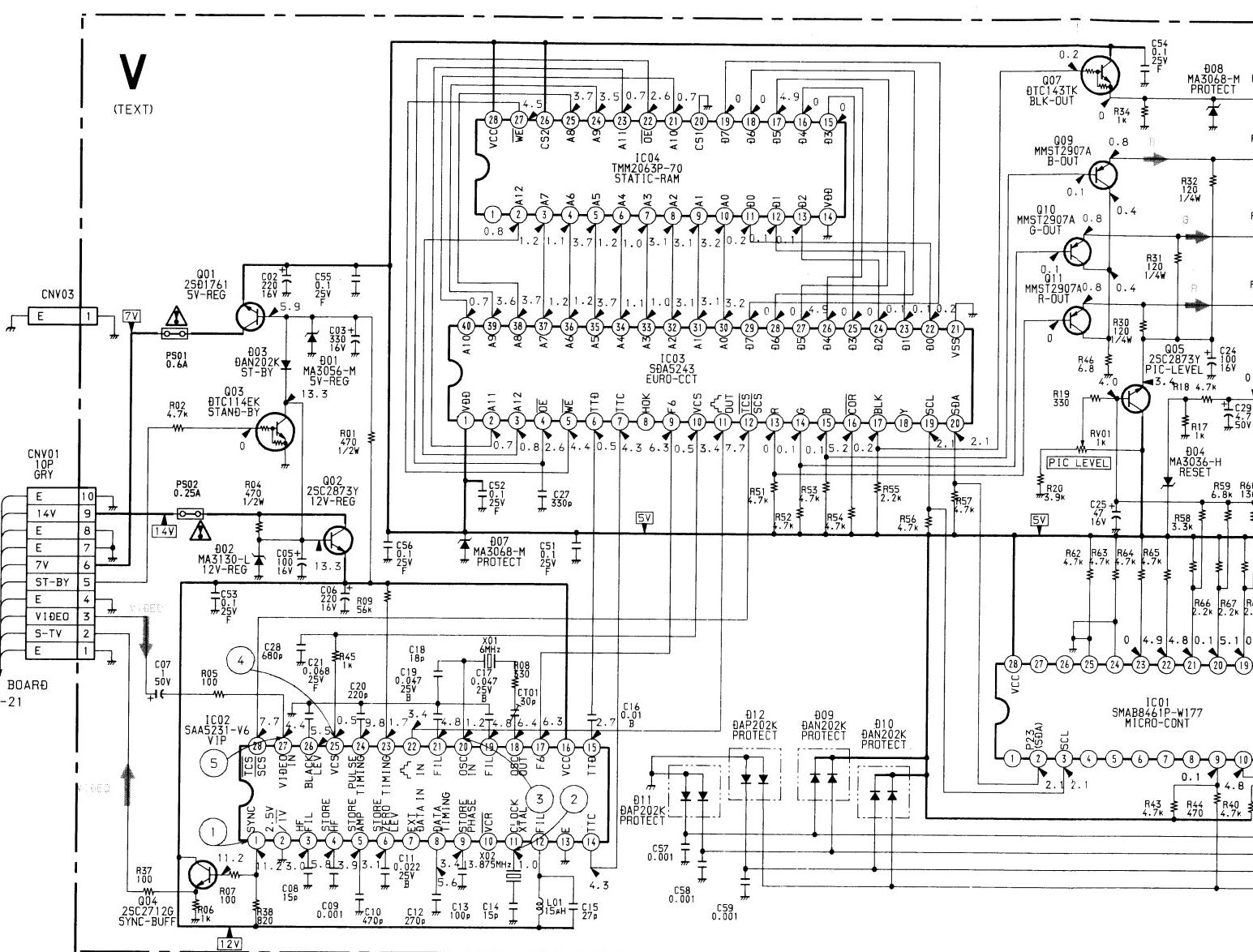


1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16

A



B



C

D

E

F

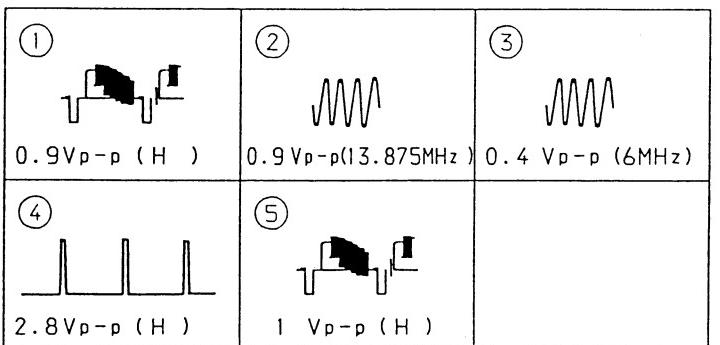
G

H

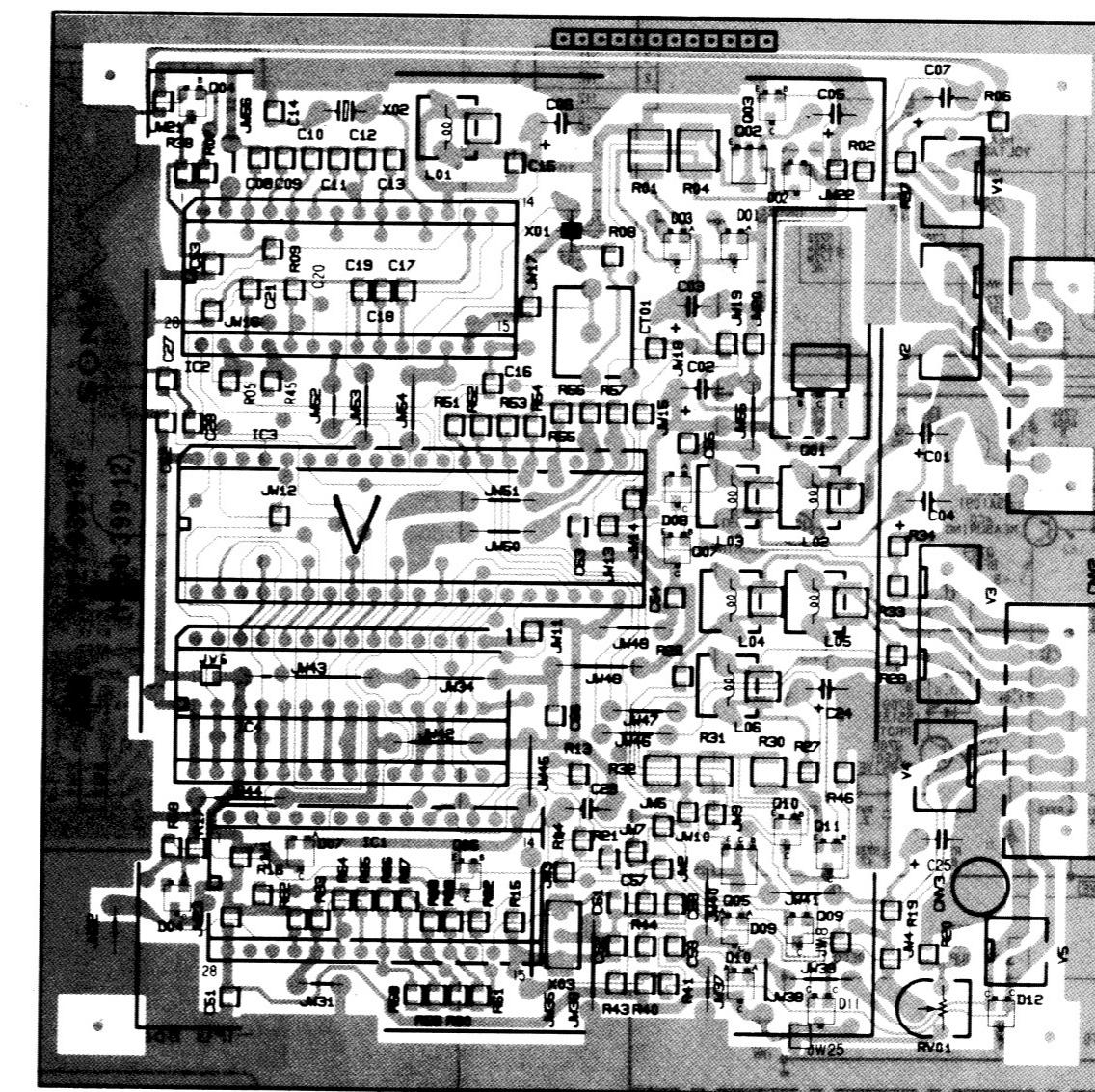
I

J

• WAVEFORMS V BOARD



—V Board—



[R • G • B OUT] [SIF]

1 | **2** | **3** | **4** | **5** | **6** | **7** |

A

C (R.G.B OUT)

TO D BOARD T802 FV

TO CRT COATING EARTH

GND

SCREEN MIN-MAX 214-916

R.V.702 110M H. STAT

R.V.725 100K 1/2W :RC

C.716 330V 400V B

R.C.V.

G.4 GND

G.2

G.1-1

G.1-3

K.R.

K.G.

K.B.

G.1-2

GND

H.1

H.2

GND

R.V.701 110M RGP10G HEATING VOLTAGE REC

R.V.728 0.028 1W :RC

R.V.724 470K 1/2W :RC

R.V.709 330K 1/2W :RC

R.V.722 680K 1/2W :RC

R.V.734 100Ω

L.704 33μH

SCREEN

R.V.701 2.2M

R.V.721 220k 1/2W 10% :RC

R.V.720 680V B

R.V.728 0.0147 2.2V E

R.V.724 470K 1/2W :RC

R.V.722 680K 1/2W :RC

R.V.734 100Ω

L.704 33μH

200V

R.V.704 680P 35V :RS

C.704 680P 1/2W :RC

R.V.705 680P 1/2W :RC

R.V.714 680P 35V :RS

C.706 680P 1/2W :RC

R.V.715 680P 35V :RS

C.709 680P 35V :RS

R.V.736 680P 35V :RS

R.V.724 680P 1/2W :RC

1

0706 155133 PROT

0704 2SA1091 ACO MEASURING

Q.703 BF871 R OUT

14.5 141

5.6G OUT

162

2

0708 155133

0707 1525A1091 ACO MEASURING

Q.709 BF871 5.6B OUT

162

161

0710 155133

0710 155133 ACO MEASURING

169

6.7

10.9

12V

R.704 220 3.6

10.8

0705 155133 PROT

0702 JC501 R DRIVE

R.706 220 3.6

10.8

0707 155133 PROT

0705 JC501 G DRIVE

R.707 3.0

5.6k

R.708 47

C.703 270P 50V

R.710 680 47

R.711 680 47

R.712 1.0k

R.716 220 3.9

3.3

0702 155133

DECOUPLING ACO R

R.717 680 47

R.719 680 47

R.720 3.3k

R.723 1.0k

R.727 220 4.1

3.5

0703 155133

DECOUPLING ACO G

R.729 820 47

R.730 820 47

R.731 3.3k

R.732 680 47

R.739 1.0k

R.740 2.2k

R.741 50V

R.742 2.2k

R.743 680 47

R.744 2.2k

R.745 50V

R.746 2.2k

R.747 680 47

R.748 2.2k

R.749 50V

R.750 2.2k

R.751 680 47

R.752 2.2k

R.753 50V

R.754 2.2k

R.755 680 47

R.756 2.2k

R.757 50V

R.758 2.2k

R.759 680 47

R.760 2.2k

R.761 50V

R.762 2.2k

R.763 680 47

R.764 2.2k

R.765 50V

R.766 2.2k

R.767 680 47

R.768 2.2k

R.769 50V

R.770 2.2k

R.771 680 47

R.772 2.2k

R.773 50V

R.774 2.2k

R.775 680 47

R.776 2.2k

R.777 50V

R.778 2.2k

R.779 680 47

R.780 2.2k

R.781 50V

R.782 2.2k

R.783 680 47

R.784 2.2k

R.785 50V

R.786 2.2k

R.787 680 47

R.788 2.2k

R.789 50V

R.790 2.2k

R.791 680 47

R.792 2.2k

R.793 50V

R.794 2.2k

R.795 680 47

R.796 2.2k

R.797 680 47

R.798 2.2k

R.799 680 47

R.800 2.2k

R.801 680 47

R.802 2.2k

R.803 680 47

R.804 2.2k

R.805 680 47

R.806 2.2k

R.807 680 47

R.808 2.2k

R.809 680 47

R.810 2.2k

R.811 680 47

R.812 2.2k

R.813 680 47

R.814 2.2k

R.815 680 47

R.816 2.2k

R.817 680 47

R.818 2.2k

R.819 680 47

R.820 2.2k

R.821 680 47

R.822 2.2k

R.823 680 47

R.824 2.2k

R.825 680 47

R.826 2.2k

R.827 680 47

R.828 2.2k

R.829 680 47

R.830 2.2k

R.831 680 47

R.832 2.2k

R.833 680 47

R.834 2.2k

R.835 680 47

R.836 2.2k

R.837 680 47

R.838 2.2k

R.839 680 47

R.840 2.2k

R.841 680 47

R.842 2.2k

R.843 680 47

R.844 2.2k

R.845 680 47

R.846 2.2k

R.847 680 47

R.848 2.2k

R.849 680 47

R.850 2.2k

R.851 680 47

R.852 2.2k

R.853 680 47

R.854 2.2k

R.855 680 47

R.856 2.2k

R.857 680 47

R.858 2.2k

R.859 680 47

R.860 2.2k

R.861 680 47

R.862 2.2k

R.863 680 47

R.864 2.2k

R.865 680 47

R.866 2.2k

R.867 680 47

R.868 2.2k

R.869 680 47

R.870 2.2k

R.871 680 47

R.872 2.2k

R.873 680 47

R.874 2.2k

R.875 680 47

R.876 2.2k

R.877 680 47

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R.1000 2.2k

R.1001 680 47

R.1002 2.2k

R.1003 680 47

R.1004 2.2k

R.1005 680 47

R.1006 2.2k

R.1007 680 47

R.1008 2.2k

R.1009 680 47

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R.1016 2.2k

R.1017 680 47

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R.1103 680 47

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R.1123 680 47

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R.1125 680 47

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R.1275 680 47

R.1276 2.2k

R.1277 680 47

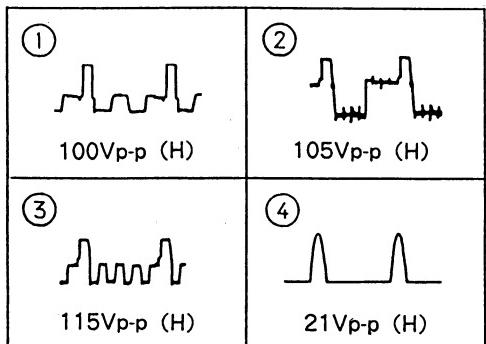
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R.1279 680 47

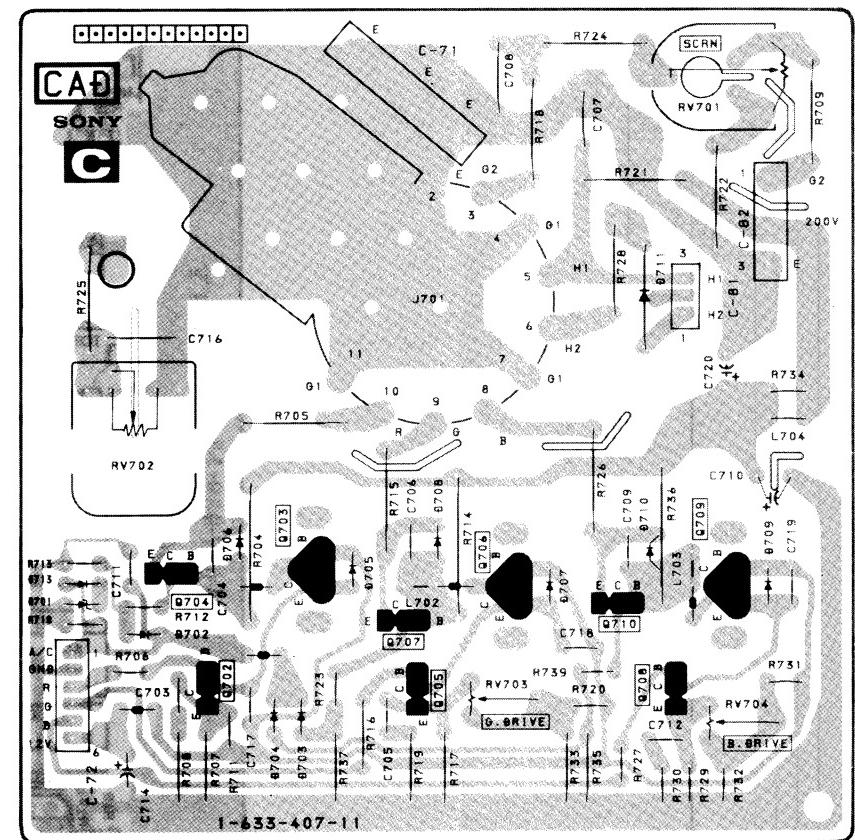
R.1280 2.2k

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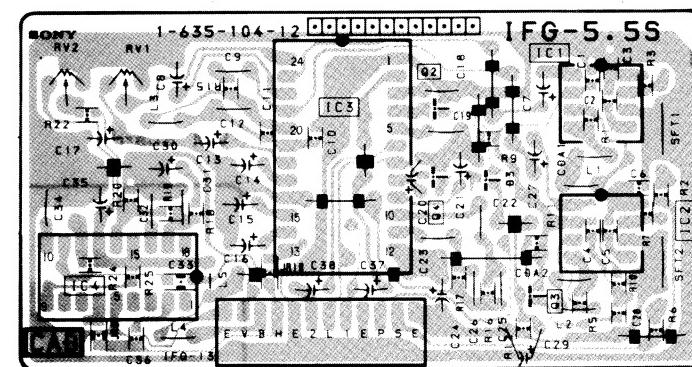
• WAVEFORMS C BOARD



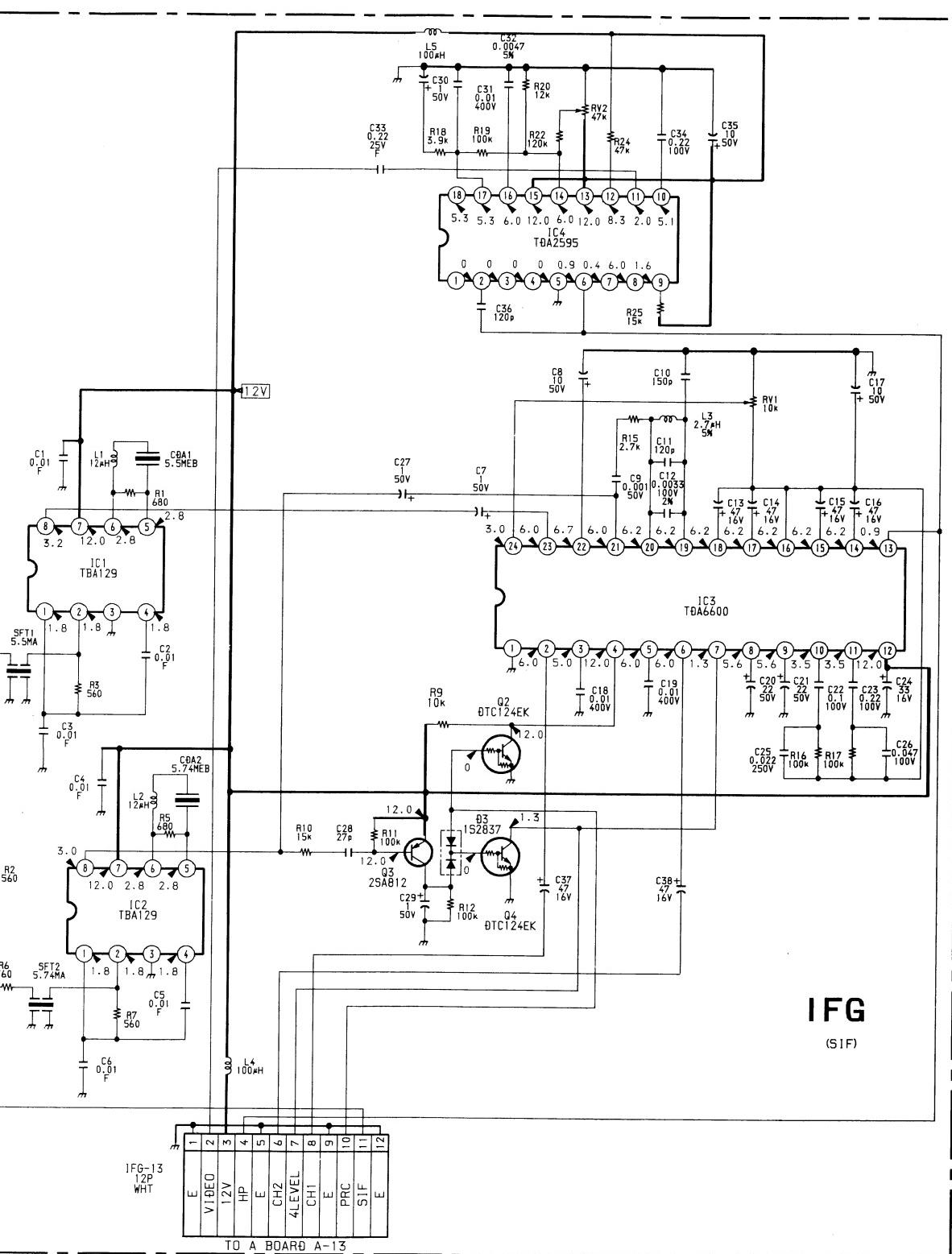
-C Board-



- IFG Board -



5-4. SCHEMATIC DIAGRAM (SIF-102 IFG-5.5G)



SECTION 6

EXPLODED VIEWS

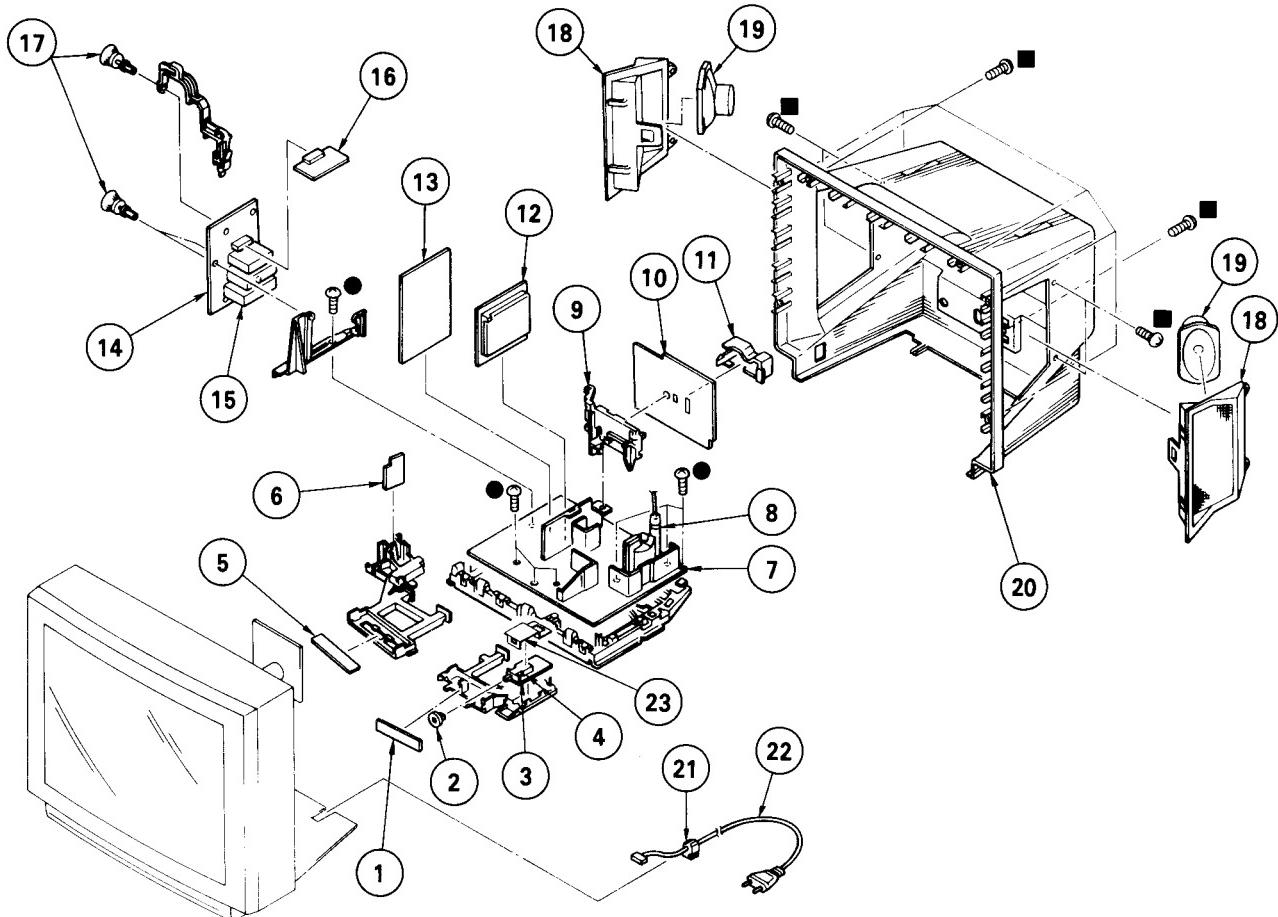
NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark **△** are critical for safety.
Replace only with part number specified.

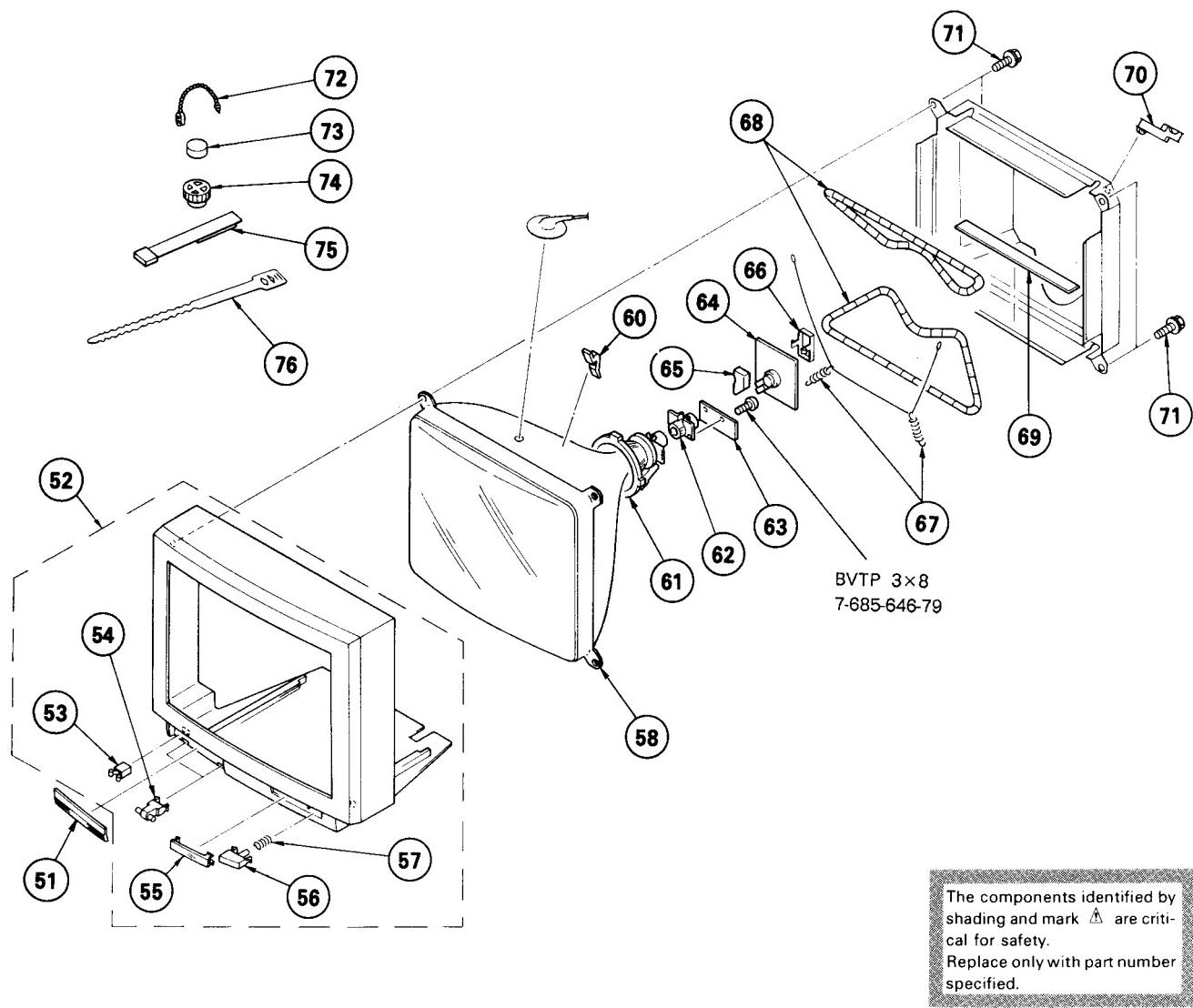
(1) CHASSIS

- : BVTP 3x12 7-685-648-79
- : BVTP 4x16 7-685-663-79



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
1	*1-633-410-11	H2 BOARD		13	*A-1621-011-A	B BOARD, COMPLETE	
2	4-386-611-01	COVER, SWITCH		14	*A-1632-005-A	A BOARD, COMPLETE	
3	*1-633-408-11	F BOARD		15	△.1-465-301-11	TUNER, ET (UV-816(PLL))	
4	△.1-571-433-11	SWITCH, PUSH (AC POWER)		16	*A-1654-003-A	IFG BOARD, COMPLETE	
5	*1-633-409-11	H1 BOARD		17	4-386-618-01	RIVET, T TYPE	
6	*1-633-411-11	J2 BOARD		18	X-4398-901-1	BOARD ASSY, BAFFLE	
7	*A-1642-008-A	D BOARD, COMPLETE		19		SPEAKER	
8	△.1-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)		20	4-398-910-01	COVER, REAR	
9	*4-386-624-11	BRACKET, J		21	△.4-389-201-02	HOLDER, AC CORD	
10	*A-1651-015-A	J1 BOARD, COMPLETE		22	△.1-575-487-11	CORD, POWER (WITH NOISE FILTER)	
11	4-200-014-01	BRACKET, TERMINAL		23	4-200-274-01	COVER, POWER SWITCH	
12	*A-1347-031-A	V BOARD, COMPLETE					

(2) PICTURE TUBE



REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
51	4-398-911-01	DOOR, CONTROL		65	*4-379-167-01	COVER (MAIN), CV	
52	X-4398-902-1	CABINET ASSY (WITH BEZEL ASSY)	53-57	66	*4-379-160-01	COVER (REAR LID), CV	
53	4-392-036-01	CATCHER, PUSH		67	4-369-318-00	SPRING, TENSION	
54	3-703-035-11	SHAFT, LID		68	△.1-426-398-11	COIL, DEMAGNETIZATION	
55	4-200-148-01	WINDOW, ORNAMENTAL		69	4-389-291-01	CUSHION	
56	4-200-150-01	BUTTON, POWER		70	*4-387-216-01	HOLDER, LEAD	
57	4-329-112-21	SPRING		71	4-373-263-01	SCREW (M), PT	
58	△.8-733-823-05	PICTURE TUBE (A68JYK60X)		72	4-308-870-00	CLIP, LEAD WIRE	
60	3-704-495-01	SPACER, DV		73	1-452-032-00	MAGNET, DISK; 10MM φ	
61	△.1-451-313-21	DEFLECTION YOKE (Y29FXA)		74	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM φ	
62	△.1-452-509-42	NECK ASSY, PICTURE TUBE (NA-308)		75	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
63	*1-634-193-11	VM BOARD		76	3-701-007-00	BAND, BINDING	
64	*A-1638-007-A	C BOARD, COMPLETE					

SECTION 7

ELECTRICAL PARTS LIST



NOTE:

The components identified by shading and mark A are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
 - All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

COILS
MMH : mH, UH : μ H

RESISTORS

- All resistors are in ohms
 - F : nonflammable

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1347-031-A	V BOARD, COMPLETE	<DIODE>					
*4-380-699-01	CASE (UPPER LID), SHIELD, A1					D01 8-719-105-91 DIODE RD5.6M-B2	
	<CAPACITOR>					D02 8-719-106-79 DIODE RD13M-B1	
C02	1-124-120-11	ELECT	220MF	20%	16V	D03 8-719-400-18 DIODE MA152WK	
C03	1-124-119-00	ELECT	330MF	20%	16V	D04 8-719-105-52 DIODE RD3.6M-B2	
C05	1-126-101-11	ELECT	100MF	20%	16V	D07 8-719-106-17 DIODE RD6.8M-B2	
C06	1-124-120-11	ELECT	220MF	20%	16V		
C07	1-124-791-11	ELECT	1MF	20%	50V		
C08	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	D08 8-719-106-17 DIODE RD6.8M-B2	
C09	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	D09 8-719-400-18 DIODE MA152WK	
C10	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	D10 8-719-400-18 DIODE MA152WK	
C11	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V	D11 8-719-914-44 DIODE DAP202K	
C12	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	D12 8-719-914-44 DIODE DAP202K	
C13	1-163-117-00	CERAMIC CHIP	100PF	5%	50V		
C14	1-163-097-00	CERAMIC CHIP	15PF	5%	50V		
C15	1-163-103-00	CERAMIC CHIP	27PF	5%	50V		
C16	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V		
C17	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V		
C18	1-163-099-00	CERAMIC CHIP	18PF	5%	50V		
C19	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V		
C20	1-163-125-00	CERAMIC CHIP	220PF	5%	50V		
C21	1-163-833-00	CERAMIC CHIP	0.068MF		25V		
C24	1-126-101-11	ELECT	100MF	20%	16V		
C25	1-124-477-11	ELECT	47MF	20%	16V		
C27	1-163-129-00	CERAMIC CHIP	330PF	5%	50V		
C28	1-163-137-00	CERAMIC CHIP	680PF	5%	50V		
C29	1-124-927-11	ELECT	4.7MF	20%	50V		
C51	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C52	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C53	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C54	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C55	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C56	1-163-038-00	CERAMIC CHIP	0.1MF		25V		
C57	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V		
C58	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V		
C59	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V		
	<CONNECTOR>						
CNV01	*1-565-393-11	CONNECTOR, BOARD TO BOARD					
CNV02	*1-565-393-11	CONNECTOR, BOARD TO BOARD					
CNV03	*1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P					
	<RESISTOR>						
JW1	1-216-295-00	METAL GLAZE	0	5%			1/10W
JW2	1-216-295-00	METAL GLAZE	0	5%			1/10W
JW3	1-216-295-00	METAL GLAZE	0	5%			1/10W
JW4	1-216-295-00	METAL GLAZE	0	5%			1/10W
JW5	1-216-295-00	METAL GLAZE	0	5%			1/10W
JW6	1-216-295-00	METAL GLAZE	0	5%			1/10W
CT01	1-141-392-11	CAP, VAR, TRIMMER (1 GANG)					

V **B**

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
JW7	I-216-295-00	METAL GLAZE	0 5% 1/10W	R64	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JW8	I-216-295-00	METAL GLAZE	0 5% 1/10W	R65	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W
JW9	I-216-295-00	METAL GLAZE	0 5% 1/10W	R66	I-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JW10	I-216-295-00	METAL GLAZE	0 5% 1/10W	R67	I-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JW11	I-216-295-00	METAL GLAZE	0 5% 1/10W	R68	I-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JW12	I-216-295-00	METAL GLAZE	0 5% 1/10W	R69	I-216-057-00	METAL GLAZE	2.2K 5% 1/10W
JW13	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW14	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW15	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW16	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW17	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW18	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW19	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW20	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW21	I-216-295-00	METAL GLAZE	0 5% 1/10W				
JW22	I-216-295-00	METAL GLAZE	0 5% 1/10W	X01	I-567-162-00	OSCILLATOR, CRYSTAL	
JW23	I-216-295-00	METAL GLAZE	0 5% 1/10W	X02	I-567-495-11	OSCILLATOR, CRYSTAL	
JW24	I-216-295-00	METAL GLAZE	0 5% 1/10W	X03	I-577-082-11	VIBRATOR, CERAMIC	
JW25	I-216-295-00	METAL GLAZE	0 5% 1/10W				
RO1	I-218-326-11	METAL GLAZE	470 5% 1/2W				
RO2	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
RO4	I-218-326-11	METAL GLAZE	470 5% 1/2W				
RO5	I-216-025-00	METAL GLAZE	100 5% 1/10W				
RO6	I-216-049-00	METAL GLAZE	1K 5% 1/10W				
RO7	I-216-025-00	METAL GLAZE	100 5% 1/10W				
RO8	I-216-037-00	METAL GLAZE	330 5% 1/10W				
RO9	I-216-091-00	METAL GLAZE	56K 5% 1/10W				
R13	I-216-025-00	METAL GLAZE	100 5% 1/10W				
R14	I-216-025-00	METAL GLAZE	100 5% 1/10W				
R15	I-216-121-00	METAL GLAZE	1M 5% 1/10W				
R16	I-216-055-00	METAL GLAZE	1.8K 5% 1/10W				
R17	I-216-049-00	METAL GLAZE	1K 5% 1/10W				
R18	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R19	I-216-037-00	METAL GLAZE	330 5% 1/10W				
R20	I-216-063-00	METAL GLAZE	3.9K 5% 1/10W				
R27	I-216-013-00	METAL GLAZE	33 5% 1/10W				
R28	I-216-013-00	METAL GLAZE	33 5% 1/10W				
R29	I-216-013-00	METAL GLAZE	33 5% 1/10W				
R30	I-218-325-11	METAL GLAZE	120 5% 1/4W				
R31	I-218-325-11	METAL GLAZE	120 5% 1/4W				
R32	I-218-325-11	METAL GLAZE	120 5% 1/4W				
R33	I-216-023-00	METAL GLAZE	82 5% 1/10W				
R34	I-216-049-00	METAL GLAZE	1K 5% 1/10W				
R37	I-216-025-00	METAL GLAZE	100 5% 1/10W				
R38	I-216-047-00	METAL GLAZE	820 5% 1/10W				
R40	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R41	I-216-041-00	METAL GLAZE	470 5% 1/10W				
R43	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R44	I-216-041-00	METAL GLAZE	470 5% 1/10W				
R45	I-216-049-00	METAL GLAZE	1K 5% 1/10W				
R46	I-216-311-00	METAL GLAZE	6.8 5% 1/10W				
R51	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R52	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R53	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R54	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R55	I-216-057-00	METAL GLAZE	2.2K 5% 1/10W				
R56	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R57	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R58	I-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R59	I-216-069-00	METAL GLAZE	6.8K 5% 1/10W				
R60	I-216-076-00	METAL GLAZE	13K 5% 1/10W				
R61	I-216-083-00	METAL GLAZE	27K 5% 1/10W				
R62	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
R63	I-216-065-00	METAL GLAZE	4.7K 5% 1/10W				
<VARIABLE RESISTOR>							
RV01 I-238-012-11 RES, ADJ, CARBON 1K							
<CRYSTAL>							
X01	I-567-162-00	OSCILLATOR, CRYSTAL					
X02	I-567-495-11	OSCILLATOR, CRYSTAL					
X03	I-577-082-11	VIBRATOR, CERAMIC					

*A-1621-011-A B BOARD, COMPLETE							

<CAPACITOR>							
C301	I-106-228-00	MYLAR	0.22MF	10%	100V		
C302	I-106-228-00	MYLAR	0.22MF	10%	100V		
C303	I-124-122-11	ELECT	100MF	20%	50V		
C304	I-106-228-00	MYLAR	0.22MF	10%	100V		
C305	I-124-119-00	ELECT	330MF	20%	16V		
C306	I-124-902-00	ELECT	0.47MF	20%	50V		
C307	I-124-902-00	ELECT	0.47MF	20%	50V		
C308	I-124-902-00	ELECT	0.47MF	20%	50V		
C309	I-124-902-00	ELECT	0.47MF	20%	50V		
C310	I-106-220-00	MYLAR	0.1MF	10%	100V		
C311	I-106-220-00	MYLAR	0.1MF	10%	100V		
C312	I-124-902-00	ELECT	0.47MF	20%	50V		
C313	I-124-902-00	ELECT	0.47MF	20%	50V		
C314	I-124-902-00	ELECT	0.47MF	20%	50V		
C315	I-124-791-11	ELECT	1MF	20%	50V		
C316	I-106-220-00	MYLAR	0.1MF	10%	100V		
C317	I-124-910-11	ELECT	47MF	20%	50V		
C318	I-106-220-00	MYLAR	0.1MF	10%	100V		
C320	I-163-121-00	CERAMIC CHIP	150PF	5%	50V		
C322	I-163-121-00	CERAMIC CHIP	150PF	5%	50V		
C323	I-102-947-00	CERAMIC	10PF	0.5PF	50V		
C327	I-164-232-11	CERAMIC CHIP	0.01MF	50V			
C330	I-163-113-00	CERAMIC CHIP	68PF	5%	50V		
C331	I-106-220-00	MYLAR	0.1MF	10%	100V		
C332	I-126-103-11	ELECT	470MF	20%	16V		
C333	I-106-375-12	MYLAR	0.022MF	10%	250V		
C334	I-163-097-00	CERAMIC CHIP	15PF	5%	50V		
C335	I-163-097-00	CERAMIC CHIP	15PF	5%	50V		
C336	I-102-816-00	CERAMIC	120PF	5%	50V		
C337	I-101-004-00	CERAMIC	0.01MF	50V			
C338	I-106-220-00	MYLAR	0.1MF	10%	100V		
C339	I-106-220-00	MYLAR	0.1MF	10%	100V		
C341	I-163-125-00	CERAMIC CHIP	220PF	5%	50V		
C343	I-106-383-00	MYLAR	0.047MF	10%	100V		
C344	I-130-783-00	MYLAR	0.33MF	10%	100V		
C345	I-163-123-00	CERAMIC CHIP	180PF	5%	50V		
C346	I-163-033-00	CERAMIC CHIP	0.022MF	50V			

B

B F A

The components identified by shading and mark  are critical for safety.
Replace only with part number specified.

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Replace only with part number specified.

A C

REF.NO.	PART NO.	DESCRIPTION			REMARK	REF.NO.	PART NO.	DESCRIPTION			REMARK	
C177	1-102-074-00	CERAMIC	0.001MF	10%	50V			<IF BLOCK>				
C181	1-101-004-00	CERAMIC	0.01MF		50V	VIF101	I-466-154-21	IF BLOCK (IFG-389S)				
		<IC>						*****				
IC103	8-759-979-62	IC	PCR8574					*A-1638-007-A	C BOARD, COMPLETE			
		<COIL>						*****				
L100	I-410-116-11	INDUCTOR	0.56MH					1-506-348-99	PIN, CONNECTOR 3P			
L101	I-408-225-00	INDUCTOR	3.3UH					*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
L102	I-408-413-00	INDUCTOR	22UH					*1-568-878-51	PIN, CONNECTOR 3P			
L107	I-408-397-00	INDUCTOR	1UH					*1-568-881-51	PIN, CONNECTOR 6P			
		<TRANSISTOR>						*4-379-160-01	COVER (REAR LID), CV			
		<CAPACITOR>						*4-379-167-01	COVER (MAIN), CV			
Q113	8-729-271-22	TRANSISTOR	2SC2712-G					C703	1-102-980-00	CERAMIC	270PF	5% 50V
Q114	8-729-271-22	TRANSISTOR	2SC2712-G					C704	1-102-116-00	CERAMIC	680PF	10% 50V
Q115	8-729-271-22	TRANSISTOR	2SC2712-G					C705	1-102-978-00	CERAMIC	220PF	5% 50V
Q116	8-729-271-22	TRANSISTOR	2SC2712-G					C706	1-102-116-00	CERAMIC	680PF	10% 50V
Q125	8-729-900-89	TRANSISTOR	DTC144ES					C707	1-162-116-00	CERAMIC	680PF	10% 2KV
Q126	8-729-901-06	TRANSISTOR	DTA144EK					C708	1-162-114-00	CERAMIC	0.0047MF	
Q181	8-729-271-22	TRANSISTOR	2SC2712-G					C709	1-102-116-00	CERAMIC	680PF	10% 50V
		<RESISTOR>						C710	1-123-947-00	ELECT	10MF	20% 250V
JR230	1-216-295-00	METAL GLAZE	0	5%	1/10W			C711	1-101-880-00	CERAMIC	47PF	5% 50V
JR252	1-216-296-00	METAL GLAZE	0	5%	1/8W			C712	1-102-980-00	CERAMIC	270PF	5% 50V
JR253	1-216-296-00	METAL GLAZE	0	5%	1/8W			C714	1-124-360-00	ELECT	1000MF	20% 16V
JR255	1-216-296-00	METAL GLAZE	0	5%	1/8W			C716	1-162-622-11	CERAMIC	330PF	10% 400V
JR256	1-216-296-00	METAL GLAZE	0	5%	1/8W			C717	1-102-114-00	CERAMIC	470PF	10% 50V
JR257	1-216-296-00	METAL GLAZE	0	5%	1/8W			C718	1-102-114-00	CERAMIC	470PF	10% 50V
		<DIODE>						C719	1-102-114-00	CERAMIC	470PF	10% 50V
JR258	1-216-296-00	METAL GLAZE	0	5%	1/8W							
R101	1-216-025-00	METAL GLAZE	100	5%	1/10W							
R105	1-216-079-00	METAL GLAZE	18K	5%	1/10W							
R107	1-216-081-00	METAL GLAZE	22K	5%	1/10W			D701	8-719-929-16	DIODE HZS9.1NB3		
R108	1-216-079-00	METAL GLAZE	18K	5%	1/10W			D702	8-719-911-19	DIODE ISS119		
R110	1-249-429-11	CARBON	10K	5%	1/4W			D703	8-719-911-19	DIODE ISS119		
R111	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W			D704	8-719-911-19	DIODE ISS119		
R116	1-216-023-00	METAL GLAZE	82	5%	1/10W			D705	8-719-911-19	DIODE ISS119		
R118	1-216-085-00	METAL GLAZE	33K	5%	1/10W			D706	8-719-911-19	DIODE ISS119		
R128	1-216-027-00	METAL GLAZE	120	5%	1/10W			D707	8-719-911-19	DIODE ISS119		
R129	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W			D708	8-719-911-19	DIODE ISS119		
R130	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W			D709	8-719-911-19	DIODE ISS119		
R157	1-216-049-00	METAL GLAZE	1K	5%	1/10W			D710	8-719-911-19	DIODE ISS119		
R158	1-249-409-11	CARBON	220	5%	1/4W			D711	8-719-300-33	DIODE RU-3AM		
R159	1-249-409-11	CARBON	220	5%	1/4W			D713	8-719-911-19	DIODE ISS119		
R161	1-216-089-00	METAL GLAZE	47K	5%	1/10W							
R162	1-216-095-00	METAL GLAZE	82K	5%	1/10W							
R163	1-216-095-00	METAL GLAZE	82K	5%	1/10W							
R164	1-216-075-00	METAL GLAZE	12K	5%	1/10W							
R165	1-216-075-00	METAL GLAZE	12K	5%	1/10W			J701	1-526-990-11	SOCKET, PICTURE TUBE		
R167	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W							
R168	1-216-089-00	METAL GLAZE	47K	5%	1/10W							
R169	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W			L704	1-410-878-11	INDUCTOR	33UH	
R181	1-216-049-00	METAL GLAZE	1K	5%	1/10W							
R182	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W							
		<JACK>										
		<COIL>										
		<TRANSISTOR>										
R193	1-216-073-00	METAL GLAZE	10K	5%	1/10W							
R194	1-216-017-00	METAL GLAZE	47	5%	1/10W			Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE		
R195	1-216-017-00	METAL GLAZE	47	5%	1/10W			Q703	8-729-906-70	TRANSISTOR BF871		
R196	1-216-113-00	METAL GLAZE	470K	5%	1/10W			Q704	8-729-200-17	TRANSISTOR 2SA1091-0		
		<TUNER>						Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE		
		<TRANSISTOR>						Q706	8-729-906-70	TRANSISTOR BF871		

<TUNER>

TU101A 1-465-301-11 TUNER, ET (UV-816(PLL))

C **D**

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
Q707	8-729-200-17	TRANSISTOR 2SA1091-0		*4-341-751-01	EYELET			
Q708	8-729-119-78	TRANSISTOR 2SC2785-HFE		*4-341-752-01	EYELET			
Q709	8-729-906-70	TRANSISTOR BF871		*4-368-683-01	SPRING			
Q710	8-729-200-17	TRANSISTOR 2SA1091-0						
<RESISTOR>								
R704	1-216-486-00	METAL OXIDE	8.2K 5%	3W F	C002	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R705	1-202-824-00	SOLID	3.3K 10%	1/2W	C003	1-123-875-11	ELECT 10MF	20% 50V
R706	1-249-409-11	CARBON	220 5%	1/4W	C004	1-124-120-11	ELECT 220MF	20% 16V
R707	1-249-412-11	CARBON	390 5%	1/4W	C005	1-124-791-11	ELECT 1MF	20% 50V
R708	1-249-401-11	CARBON	47 5%	1/4W	C006	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R709	1-202-844-00	SOLID	330K 10%	1/2W	C007	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
R710	1-215-465-00	METAL	68K 1%	1/6W	C008	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R711	1-249-426-11	CARBON	5.6K 5%	1/4W	C009	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
R712	1-249-417-11	CARBON	1K 5%	1/4W	C010	1-124-120-11	ELECT 220MF	20% 16V
R713	1-215-471-00	METAL	120K 1%	1/6W	C011	1-163-232-11	CERAMIC CHIP 0.01MF	50V
R714	1-216-486-00	METAL OXIDE	8.2K 5%	3W F	C012	1-123-875-11	ELECT 10MF	20% 50V
R715	1-202-824-00	SOLID	3.3K 10%	1/2W	C013	1-106-220-00	MYLAR 0.1MF	10% 100V
R716	1-249-409-11	CARBON	220 5%	1/4W	C014	1-106-220-00	MYLAR 0.1MF	10% 100V
R717	1-249-415-11	CARBON	680 5%	1/4W	C015	1-124-902-00	ELECT 0.47MF	20% 50V
R718	1-202-814-11	SOLID	33K 10%	1/2W	C016	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
R719	1-249-401-11	CARBON	47 5%	1/4W	C017	1-106-220-00	MYLAR 0.1MF	10% 100V
R720	1-249-423-11	CARBON	3.3K 5%	1/4W	C018	1-163-127-00	CERAMIC CHIP 270PF	5% 50V
R721	1-202-842-11	SOLID	220K 10%	1/2W	C019	1-106-383-00	MYLAR 0.047MF	10% 100V
R722	1-202-848-00	SOLID	680K 10%	1/2W	C020	1-124-917-11	ELECT 33MF	20% 50V
R723	1-249-417-11	CARBON	1K 5%	1/4W	C021	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R724	1-202-846-00	SOLID	470K 10%	1/2W	C022	1-164-232-11	CERAMIC CHIP 0.01MF	50V
R725	1-202-838-00	SOLID	100K 10%	1/2W	C023	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R726	1-202-824-00	SOLID	3.3K 10%	1/2W	C024	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R727	1-249-409-11	CARBON	220 5%	1/4W	C025	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
R728	1-216-347-11	METAL OXIDE	0.68 5%	1W F	C027	1-124-910-11	ELECT 47MF	20% 50V
R729	1-249-416-11	CARBON	820 5%	1/4W	C029	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R730	1-249-401-11	CARBON	47 5%	1/4W	C030	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R731	1-249-423-11	CARBON	3.3K 5%	1/4W	C031	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R732	1-249-415-11	CARBON	680 5%	1/4W	C032	1-163-081-00	CERAMIC CHIP 0.22MF	25V
R733	1-249-415-11	CARBON	680 5%	1/4W	C251	1-124-791-11	ELECT 1MF	20% 50V
R734	1-249-405-11	CARBON	100 5%	1/4W	C252	1-126-233-11	ELECT 22MF	20% 50V
R735	1-215-493-00	METAL	1K 1%	1/6W	C253	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
R736	1-216-486-00	METAL OXIDE	8.2K 5%	3W F	C254	1-106-220-00	MYLAR 0.1MF	10% 100V
R737	1-215-485-00	METAL	470K 1%	1/6W	C255	1-124-636-00	ELECT 3300MF	20% 25V
R739	1-249-417-11	CARBON	1K 5%	1/4W	C261	1-124-791-11	ELECT 1MF	20% 50V
<VARIABLE RESISTOR>								
RV701	1-230-641-11	RES, ADJ, METAL GLAZE	2.2M		C262	1-126-233-11	ELECT 22MF	20% 50V
RV702A	1-230-619-11	RES, ADJ, METAL GLAZE	110M		C263	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
RV703	1-237-749-11	RES, ADJ, CARBON	2200		C264	1-106-220-00	MYLAR 0.1MF	10% 100V
RV704	1-237-749-11	RES, ADJ, CARBON	2200		C265	1-124-564-11	ELECT 4700MF	20% 25V

*A-1642-008-A D BOARD, COMPLETE								

*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			C507	1-130-783-00	MYLAR 0.33MF	10% 100V	
*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			C508	1-106-375-12	MYLAR 0.022MF	10% 250V	
*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)			C509	1-106-220-00	MYLAR 0.1MF	10% 100V	
*1-565-394-11	PIN, BOARD TO BOARD CONNECTOR			C510	1-161-959-00	CERAMIC 22PF	10% 500V	
*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)			C511	1-108-620-11	MYLAR 0.0033MF	10% 100V	
1-568-106-11	PIN, CONNECTOR 4P			C512	1-106-220-00	MYLAR 0.1MF	10% 100V	
*1-568-536-11	PLUG (MINIATURE DY) 6P			C513	1-163-125-00	CERAMIC CHIP 220PF	5% 50V	
*1-568-878-51	PIN, CONNECTOR 3P			C514	1-106-228-00	MYLAR 0.22MF	10% 100V	
*1-568-881-51	PIN, CONNECTOR 6P			C515	1-124-791-11	ELECT 1MF	20% 50V	
*1-568-882-51	PIN, CONNECTOR 7P			C516	1-108-614-11	MYLAR 0.001MF	10% 100V	
4-200-001-01	HOLDER, IC			C517	1-124-252-00	ELECT 0.33MF	20% 50V	
				C518	1-124-902-00	ELECT 0.47MF	20% 50V	
				C519	1-136-171-00	FILM 0.33MF	5% 50V	

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D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK				
C520	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	C822	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C521	1-106-220-00	MYLAR	0.1MF	10%	100V	C823	1-106-359-00	MYLAR	0.0047MF	10%	400V
C522	1-124-122-11	ELECT	100MF	20%	50V	C824	1-102-212-00	CERAMIC	820PF	10%	500V
C523	1-108-614-11	MYLAR	0.001MF	10%	100V	C825	1-106-375-12	MYLAR	0.022MF	10%	250V
C524	1-108-798-11	MYLAR	0.0033MF	5%	50V	C1601A	1-136-518-11	FILM	0.33MF	20%	300V
C525	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	C1602A	1-136-519-11	FILM	0.47MF	20%	300V
C526	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	C1603A	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C527	1-106-220-00	MYLAR	0.1MF	10%	100V	C1604A	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C531	1-124-190-00	ELECT	680MF	10%	25V	C1605A	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C532	1-124-514-11	ELECT	100MF	20%	50V	C1606A	1-162-578-51	CERAMIC	0.0047MF	20%	400V
C533	1-106-216-00	MYLAR	0.068MF	10%	100V	C1607A	1-161-964-61	CERAMIC	0.0047MF	250V	
C534	1-124-120-11	ELECT	220MF	20%	16V						
C536	1-131-365-00	TANTALUM	10MF	10%	16V						
C537	1-124-791-11	ELECT	1MF	20%	50V						
C538	1-108-614-11	MYLAR	0.001MF	10%	100V						
C539	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	CF001	1-577-364-11	VIBRATOR, CERAMIC			
C540	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	CF501	1-567-888-11	OSCILLATOR, CERAMIC			
C592	1-124-122-11	ELECT	100MF	20%	50V						
C593	1-163-129-00	CERAMIC CHIP	330PF	5%	50V						
C601 A.	1-161-964-61	CERAMIC	0.0047MF		250V						
C602 A.	1-161-964-61	CERAMIC	0.0047MF		250V	D001	8-719-911-19	DIODE ISS119			
C603 A.	1-161-964-61	CERAMIC	0.0047MF		250V	D002	8-719-929-03	DIODE HZS6.8NB3			
C604 A.	1-125-318-11	ELECT(BLOCK)	220MF	20%	400V	D003	8-719-911-19	DIODE ISS119			
C605	1-124-510-11	ELECT	220MF	20%	35V	D004	8-719-911-19	DIODE ISS119			
C606	1-163-137-00	CERAMIC CHIP	680PF	5%	50V	D005	8-719-109-89	DIODE RD5.6ES-B2			
C607	1-130-834-00	MYLAR	1MF	10%	63V	D006	8-719-929-71	DIODE HZS33NB1			
C608	1-124-927-11	ELECT	4.7MF	20%	50V	D007	8-719-911-19	DIODE ISS119			
C611	1-124-910-11	ELECT	47MF	20%	50V	D009	8-719-109-89	DIODE RD5.6ES-B2			
C612	1-108-614-11	MYLAR	0.001MF	10%	100V	D010	8-719-120-78	DIODE RD6.2ES-L3			
C613	1-136-539-11	FILM	0.0022MF	3%	2KV	D011	8-719-120-78	DIODE RD6.2ES-L3			
C613	1-136-539-11	FILM	0.0022MF	3%	2KV	D013	8-719-109-89	DIODE RD5.6ES-B2			
C614	1-102-030-00	CERAMIC	330PF	10%	500V	D271	8-719-110-36	DIODE RD13ES-B2			
C615	1-124-557-11	ELECT	1000MF	20%	25V	D272	8-719-911-19	DIODE ISS119			
C616	1-102-030-00	CERAMIC	330PF	10%	500V	D501	8-719-911-19	DIODE ISS119			
C617	1-124-122-11	ELECT	100MF	20%	50V	D504	8-719-911-55	DIODE U05G			
C618	1-162-115-00	CERAMIC	330PF	10%	2KV	D506	8-719-800-76	DIODE ISS226			
C619	1-124-556-11	ELECT	2200MF	20%	16V	D508	8-719-911-19	DIODE ISS119			
C620	1-136-173-00	FILM	0.47MF	5%	50V	D509	8-719-911-19	DIODE ISS119			
C621	1-124-347-00	ELECT	100MF	20%	160V	D511	8-719-911-55	DIODE U05G			
C622	1-124-556-11	ELECT	2200MF	20%	16V	D512	8-719-911-55	DIODE U05G			
C623	1-124-910-11	ELECT	47MF	20%	50V	D513	8-719-928-85	DIODE HZS4.7NB2			
C624	1-124-122-11	ELECT	100MF	20%	50V	D514	8-719-911-19	DIODE ISS119			
C625	1-124-360-00	ELECT	1000MF	20%	16V	D515	8-719-911-19	DIODE ISS119			
C626	1-123-875-11	ELECT	10MF	20%	50V	D601 A.	8-719-946-90	DIODE KBU4JL-6088			
C627	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	D602	8-719-300-33	DIODE RU-3AM			
C631	1-124-927-11	ELECT	4.7MF	20%	50V	D603	8-719-911-55	DIODE U05G			
C632	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	D604	8-719-911-55	DIODE U05G			
C633	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	D605	8-719-911-55	DIODE U05G			
C801	1-126-105-11	ELECT	1000MF	20%	35V	D606	8-719-300-33	DIODE RU-3AM			
C802	1-102-030-00	CERAMIC	330PF	10%	500V	D607	8-719-300-33	DIODE RU-3AM			
C804	1-123-948-00	ELECT	22MF	20%	250V	D608	8-719-300-33	DIODE RU-3AM			
C805	1-162-114-00	CERAMIC	0.0047MF		2KV	D609	8-719-929-71	DIODE HZS33NB1			
C806	1-106-220-00	MYLAR	0.1MF	10%	100V	D610	8-719-300-59	DIODE CTU-12S			
C807	1-106-395-00	MYLAR	0.15MF	10%	200V	D611	8-719-900-26	DIODE ERD29-08J			
C810	1-123-024-21	ELECT	33MF		160V	D612	8-719-300-59	DIODE CTU-12S			
C811	1-136-113-00	FILM	2MF	5%	200V	D613	8-719-979-85	DIODE EGP20G			
C812	1-124-634-11	ELECT	1MF	20%	250V	D614	8-719-979-85	DIODE EGP20G			
C813	1-102-212-00	CERAMIC	820PF	10%	500V	D616	8-719-120-78	DIODE RD6.2ES-L3			
C814 A.	1-161-731-11	CERAMIC	0.001MF	10%	2KV	D617	8-719-911-19	DIODE ISS119			
C815	1-136-540-11	FILM	0.82MF	5%	200V	D618	8-719-109-89	DIODE RD5.6ES-B2			
C817	1-136-591-11	FILM	0.017MF	3%	1.4KV	D619	8-719-929-71	DIODE HZS33NB1			
C818	1-136-759-11	FILM	0.039MF	10%	630V	D620	8-719-800-76	DIODE ISS226			
C819 A.	1-161-731-11	CERAMIC	0.001MF	10%	2KV	D621	8-719-929-71	DIODE HZS33NB1			
C820	1-106-218-00	MYLAR	0.0082MF	10%	400V	D622	8-719-911-19	DIODE ISS119			
C821 A.	1-162-134-51	CERAMIC	470PF	10%	2KV	D623	8-719-911-19	DIODE ISS119			
						D624	8-719-911-19	DIODE ISS119			

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
D630	8-719-110-39	DIODE RD15ES-B1				<TRANSISTOR>	
D801	8-719-300-33	DIODE RU-3AM		Q001	8-729-901-01	TRANSISTOR DTC144EK	
D802	8-719-300-33	DIODE RU-3AM		Q002	8-729-901-06	TRANSISTOR DTA144EK	
D803	8-719-300-65	DIODE ES1F		Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
D804	8-719-911-55	DIODE U05G		Q004	8-729-216-22	TRANSISTOR 2SA1162-G	
D805	8-719-911-55	DIODE U05G		Q005	8-729-901-01	TRANSISTOR DTC144EK	
D806	8-719-945-80	DIODE ERC06-15S		Q006	8-729-901-01	TRANSISTOR DTC144EK	
D807	8-719-945-80	DIODE ERC06-15S		Q007	8-729-271-22	TRANSISTOR 2SC2712-G	
D808	8-719-900-26	DIODE ERD29-08J		Q008	8-729-271-22	TRANSISTOR 2SC2712-G	
				Q009	8-729-271-22	TRANSISTOR 2SC2712-G	
				Q251	8-729-271-22	TRANSISTOR 2SC2712-G	
IC001	8-759-501-66	IC SDA2083-B01Z		Q261	8-729-271-22	TRANSISTOR 2SC2712-G	
IC002	8-752-332-82	IC CXD1050A-09P		Q271	8-729-271-22	TRANSISTOR 2SC2712-G	
IC003	8-759-945-58	IC RC4558P		Q502	8-729-216-22	TRANSISTOR 2SA1162-G	
IC005	8-759-748-56	IC SDA2546		Q505	8-729-140-96	TRANSISTOR 2SD774-34	
IC251	8-759-988-94	IC TDA2050		Q506	8-729-140-97	TRANSISTOR 2SB734-34	
				Q507	8-729-216-22	TRANSISTOR 2SA1162-G	
IC261	4-201-023-01	SPACER, INSULATING; IC251		Q598	8-729-216-22	TRANSISTOR 2SA1162-G	
	4-812-134-00	RIVET NYLON, 3.5; IC251		Q601	8-729-111-67	TRANSISTOR 2SB1094-L	
	8-759-988-94	IC TDA2050		Q602	8-729-209-02	TRANSISTOR 2SD1548-LB	
	4-201-023-01	SPACER, INSULATING; IC261		Q603	8-729-111-67	TRANSISTOR 2SB1094-L	
	4-812-134-00	RIVET NYLON, 3.5; IC261		Q604	8-729-216-22	TRANSISTOR 2SA1162-G	
IC501	8-759-970-73	IC TEA2028B		Q605	8-729-271-22	TRANSISTOR 2SC2712-G	
IC502	8-759-944-57	IC TDA8170		Q606	8-729-271-22	TRANSISTOR 2SC2712-G	
IC601	8-759-988-95	IC TEA2260		Q607	8-729-920-92	TRANSISTOR 2SD2096-EF	
IC604	8-759-144-84	IC UPC24M05HF		Q608	8-729-271-22	TRANSISTOR 2SC2712-G	
IC608	8-759-037-26	IC TYA7812CT		Q609	8-729-320-62	TRANSISTOR 2SD789-34	
				Q801	8-729-271-22	TRANSISTOR 2SC2712-G	
L501	I-408-414-00	INDUCTOR 27UH		Q804	8-729-304-50	TRANSISTOR 2SD1941-06	
L501	I-408-225-00	INDUCTOR 3.3UH		Q805	8-729-119-80	TRANSISTOR 2SC2688-LK	
L601	* I-420-872-00	COIL, AIR CORE					
L602	1-410-396-41	FERRITE BEAD INDUCTOR					
L603	1-410-396-41	FERRITE BEAD INDUCTOR					
L604	I-410-671-31	INDUCTOR 47UH		JR1	I-216-295-00	METAL GLAZE 0 5% 1/10W	
L605	I-459-585-11	COIL (WITH CORE) (DRUM TYPE)		R001	I-216-041-00	METAL GLAZE 470 5% 1/10W	
L606	I-421-013-00	COIL (HORIZONTAL CHOKER) 25UH		R002	I-216-041-00	METAL GLAZE 470 5% 1/10W	
L607	I-410-671-31	INDUCTOR 47UH		R003	I-249-417-11	CARBON 1K 5% 1/4W	
L801	I-459-087-00	COIL, HCC DUST CORE 3.9MMH		R004	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
L803	I-459-104-00	COIL, DUST CORE		R005	I-249-417-11	CARBON 1K 5% 1/4W	
L804	I-408-239-00	INDUCTOR 4.7MMH		R006	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
L805	A I-459-907-22	COIL, HORIZONTAL LINEARITY		R007	I-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
L806	I-459-087-00	COIL, HCC DUST CORE 3.9MMH		R008	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
L809	* I-420-872-00	COIL, AIR CORE		R009	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
L810	A I-421-794-21	TRANSFORMER, FERRITE (PMT)		R010	I-216-041-00	METAL GLAZE 470 5% 1/10W	
				R011	I-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R013	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
LF1601A	I-421-866-12	LFT		R014	I-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
LF1602A	I-421-776-11	LFT		R015	I-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
LF1603A	I-421-592-21	TRANSFORMER, FERRITE		R016	I-216-085-00	METAL GLAZE 33K 5% 1/10W	
T601	A I-450-037-11	S.R.T		R017	I-216-748-11	METAL GLAZE 39K 5% 1/10W	
T602	A I-424-277-11	TRANSFORMER, TRIGGER PULSE		R018	I-216-095-00	METAL GLAZE 82K 5% 1/10W	
T801	A I-437-090-21	HDT		R019	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
T802	A I-439-416-11	TRANSFORMER ASSY, FLYBACK (UX-1600)		R020	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R021	I-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R022	I-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
				R023	I-216-035-00	METAL GLAZE 270 5% 1/10W	
				R024	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
PS601A	I-532-984-91	LINK, IC (ICP-N50) 2A		R025	I-216-025-00	METAL GLAZE 100 5% 1/10W	
PS602A	I-532-984-91	LINK, IC (ICP-N50) 2A		R026	I-249-417-11	CARBON 1K 5% 1/4W	
PS603A	I-532-679-91	LINK, IC (ICP-N15) 0.6A		R027	I-216-025-00	METAL GLAZE 100 5% 1/10W	
				R028	I-216-025-00	METAL GLAZE 100 5% 1/10W	
				R029	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R030	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R031	I-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R032	I-216-073-00	METAL GLAZE 10K 5% 1/10W	

D

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
R033	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R271	1-216-045-00	METAL GLAZE	680 5% 1/10W
R034	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R272	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R035	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R273	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R036	1-216-079-00	METAL GLAZE	18K 5% 1/10W	R500	1-216-115-00	METAL GLAZE	560K 5% 1/10W
R037	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R501	1-216-041-00	METAL GLAZE	470 5% 1/10W
R038	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R502	1-216-033-00	METAL GLAZE	220 5% 1/10W
R039	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R503	1-216-035-00	METAL GLAZE	270 5% 1/10W
R040	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R504	1-249-420-11	CARBON	1.8K 5% 1/4W
R041	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R505	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R042	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R506	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R043	1-216-041-00	METAL GLAZE	470 5% 1/10W	R509	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W
R044	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R510	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R045	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R514	1-216-033-00	METAL GLAZE	220 5% 1/10W
R046	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R515	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R047	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R517	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R048	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R518	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R049	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R519	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R050	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R520	1-216-037-00	METAL GLAZE	330 5% 1/10W
R051	1-216-041-00	METAL GLAZE	470 5% 1/10W	R521	1-216-025-00	METAL GLAZE	100 5% 1/10W
R052	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R522	1-215-469-00	METAL	100K 1% 1/6W
R053	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R523	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R054	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R524	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R055	1-216-037-00	METAL GLAZE	330 5% 1/10W	R526	1-249-409-11	CARBON	220 5% 1/4W F
R056	1-216-025-00	METAL GLAZE	100 5% 1/10W	R527	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R057	1-216-033-00	METAL GLAZE	220 5% 1/10W	R528	1-216-031-00	METAL GLAZE	180 5% 1/10W
R058	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R529	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R059	1-249-417-11	CARBON	1K 5% 1/4W	R530	1-249-448-11	CARBON	1.2 5% 1/4W F
R060	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R531	1-216-099-00	METAL GLAZE	120K 5% 1/10W
R061	1-249-417-11	CARBON	1K 5% 1/4W	R532	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R062	1-249-417-11	CARBON	1K 5% 1/4W	R533	1-216-295-00	METAL GLAZE	0 5% 1/10W
R063	1-249-429-11	CARBON	10K 5% 1/4W	R534	1-216-119-00	METAL GLAZE	820K 5% 1/10W
R064	1-249-417-11	CARBON	1K 5% 1/4W	R535	1-249-749-00	CARBON	2.2M 5% 1/4W
R065	1-249-429-11	CARBON	10K 5% 1/4W	R536	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R066	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R537	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R067	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R538	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R068	1-249-417-11	CARBON	1K 5% 1/4W	R539	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R069	1-249-417-11	CARBON	1K 5% 1/4W	R540	1-216-013-00	METAL GLAZE	33 5% 1/10W
R070	1-249-417-11	CARBON	1K 5% 1/4W	R541	1-216-091-00	METAL GLAZE	56K 5% 1/10W
R071	1-249-417-11	CARBON	1K 5% 1/4W	R542	1-216-308-00	METAL GLAZE	4.7 5% 1/10W
R072	1-249-417-11	CARBON	1K 5% 1/4W	R543	1-249-451-11	CARBON	2.2 5% 1/4W
R073	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R544	1-247-745-11	CARBON	330 5% 1/2W
R074	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R545	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R075	1-216-033-00	METAL GLAZE	220 5% 1/10W	R546	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R076	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R547	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R077	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R548	1-216-349-00	METAL OXIDE	1 5% 1W F
R078	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R549	1-216-454-11	METAL OXIDE	390 5% 2W F
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R550	1-216-095-00	METAL GLAZE	82K 5% 1/10W
R252	1-216-039-00	METAL GLAZE	390 5% 1/10W	R551	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R553	1-216-869-11	METAL OXIDE	1K 5% 1W
R254	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R554	1-216-037-00	METAL GLAZE	330 5% 1/10W
R255	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R555	1-216-129-00	METAL GLAZE	2.2M 5% 1/10W
R256	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R556	1-216-025-00	METAL GLAZE	100 5% 1/10W
R257	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R557	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R258	1-215-869-11	METAL OXIDE	1K 5% 1W F	R558	1-216-113-00	METAL GLAZE	470K 5% 1/10W
R259	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R559	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R261	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R560	1-216-037-00	METAL GLAZE	330 5% 1/10W
R262	1-216-039-00	METAL GLAZE	390 5% 1/10W	R561	1-216-107-00	METAL GLAZE	270K 5% 1/10W
R263	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R570	1-216-045-00	METAL GLAZE	680 5% 1/10W
R264	1-216-357-00	METAL OXIDE	4.7 5% 1W F	R591	1-216-047-00	METAL GLAZE	820 5% 1/10W
R265	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R592	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R266	1-216-115-00	METAL GLAZE	560K 5% 1/10W	R593	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R267	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R594	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R268	1-215-869-11	METAL OXIDE	1K 5% 1W F	R597	1-216-041-00	METAL GLAZE	470 5% 1/10W
R269	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

D VM

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
R598	I-215-900-11	METAL OXIDE	22K 5%	2W F			<VARIABLE RESISTOR>	
R600	I-249-381-11	CARBON	1 5%	1/4W				
R601	I-216-353-00	METAL OXIDE	2.2 5%	1W F				
R603	I-216-469-11	METAL OXIDE	12 5%	3W F				
R604	I-216-025-00	METAL GLAZE	100 5%	1/10W				
R605	I-216-081-00	METAL GLAZE	22K 5%	1/10W			<SPARK GAP>	
R606	I-216-051-00	METAL GLAZE	1.2K 5%	1/10W				
R607	I-216-067-00	METAL GLAZE	5.6K 5%	1/10W				
R608 Δ	I-216-488-51	METAL OXIDE	18K 5%	3W F	SG801	I-519-422-11	GAP, SPARK	
R609	I-216-007-00	METAL GLAZE	18 5%	1/10W				
R610	I-244-941-00	CARBON	680K 5%	1/2W			<THERMISTOR>	
R611	I-216-015-00	METAL GLAZE	39 5%	1/10W				
R612	I-216-049-00	METAL GLAZE	1K 5%	1/10W	THP601 Δ	I-808-059-31	THERMISTOR, POSITIVE	
R613	I-216-097-00	METAL GLAZE	100K 5%	1/10W				
R614	I-205-758-11	WIREWOUND	100 10%	10W F			*****	
R616	I-216-099-00	METAL GLAZE	120K 5%	1/10W			*1-634-193-11 VM BOARD	
R617	I-216-037-00	METAL GLAZE	330 5%	1/10W			*****	
R618	I-216-431-11	METAL OXIDE	560 5%	1W F			*1-568-878-51 PIN, CONNECTOR 3P	
R619	I-216-073-00	METAL GLAZE	10K 5%	1/10W				
R620	I-216-081-00	METAL GLAZE	22K 5%	1/10W				
R621	I-216-077-00	METAL GLAZE	15K 5%	1/10W			<CAPACITOR>	
R622	I-216-073-00	METAL GLAZE	10K 5%	1/10W				
R623	I-216-081-00	METAL GLAZE	22K 5%	1/10W	C751	I-101-361-00	CERAMIC	150PF 5% 50V
R624	I-216-067-00	METAL GLAZE	5.6K 5%	1/10W	C752	I-108-629-11	MYLAR	0.018MF 10% 100V
R625	I-215-865-11	METAL OXIDE	220 5%	1W F	C753	I-106-367-00	MYLAR	0.01MF 10% 400V
R626	I-216-037-00	METAL GLAZE	330 5%	1/10W	C754	I-102-980-00	CERAMIC	270PF 5% 50V
R628	I-216-001-00	METAL GLAZE	10 5%	1/10W	C757	I-108-692-11	MYLAR	0.01MF 10% 200V
R629	I-216-037-00	METAL GLAZE	330 5%	1/10W	C759	I-123-875-11	ELECT	10MF 20% 50V
R633	I-216-049-00	METAL GLAZE	1K 5%	1/10W	C760	I-124-917-11	ELECT	33MF 20% 50V
R634	I-216-430-11	METAL OXIDE	390 5%	1W F	C761	I-101-006-00	CERAMIC	0.047MF 50V
R635	I-216-073-00	METAL GLAZE	10K 5%	1/10W	C762	I-106-367-00	MYLAR	0.01MF 10% 400V
R636	I-216-073-00	METAL GLAZE	10K 5%	1/10W				
R643	I-217-189-21	WIREWOUND	0.12 5%	2W F			<COIL>	
R651	I-216-025-00	METAL GLAZE	100 5%	1/10W	L751	I-408-413-00	INDUCTOR	22UH
R653	I-205-758-11	WIREWOUND	100 10%	10W F	L770	I-410-665-31	INDUCTOR	15UH
R802	I-249-443-11	CARBON	0.47 5%	1/4W F				
R805	I-249-448-11	CARBON	1.2 5%	1/4W F			<TRANSISTOR>	
R806	I-216-093-00	METAL GLAZE	68K 5%	1/10W	Q751	8-729-119-78	TRANSISTOR	2SC2785-HFE
R807	I-215-869-11	METAL OXIDE	1K 5%	1W F	Q752	8-729-119-78	TRANSISTOR	2SC2785-HFE
R809	I-202-821-11	SOLID	1.8K 10%	1/2W	Q753	8-729-140-97	TRANSISTOR	2SB734-34
R810	I-202-818-00	SOLID	1K 10%	1/2W	Q754	8-729-140-96	TRANSISTOR	2SD774-34
R811	I-215-882-00	METAL OXIDE	22 5%	2W F				
R812	I-244-916-11	CARBON	62K 5%	1/2W			<RESISTOR>	
R815	I-215-884-11	METAL OXIDE	47 5%	2W F				
R816	I-215-868-00	METAL OXIDE	680 5%	1W F				
R817	I-216-049-00	METAL GLAZE	1K 5%	1/10W	R751	I-249-418-11	CARBON	1.2K 5% 1/4W
R820	I-249-403-11	CARBON	68 5%	1/4W	R752	I-249-426-11	CARBON	5.6K 5% 1/4W
R821	I-247-725-11	CARBON	10K 5%	1/4W F	R753	I-249-414-11	CARBON	560 5% 1/4W
R822 Δ	I-217-778-61	FUSIBLE	1K 5%	1W F	R754	I-249-434-11	CARBON	27K 5% 1/4W
R825	I-216-345-11	METAL OXIDE	0.47 5%	1W F	R755	I-249-405-11	CARBON	100 5% 1/4W
R826	I-216-097-00	METAL GLAZE	100K 5%	1/10W	R756	I-249-419-11	CARBON	1.5K 5% 1/4W
R827	I-216-073-00	METAL GLAZE	10K 5%	1/10W	R757	I-249-405-11	CARBON	100 5% 1/4W
R828	I-216-059-00	METAL GLAZE	2.7K 5%	1/10W	R758	I-249-409-11	CARBON	220 5% 1/4W
R829	I-216-051-00	METAL GLAZE	1.2K 5%	1/10W	R760	I-249-411-11	CARBON	330 5% 1/4W
R831	I-249-451-11	CARBON	2.2 5%	1/4W	R761	I-249-429-11	CARBON	10K 5% 1/4W
R1601 Δ	I-246-513-75	CARBON	47K 5%	1/4W	R762	I-247-895-00	CARBON	470K 5% 1/4W
R1602 Δ	I-244-945-91	CARBON	1M 5%	1/2W	R763	I-249-429-11	CARBON	10K 5% 1/4W
R1603 Δ	I-217-328-11	WIREWOUND	2.7 10%	7W F	R764	I-249-455-11	CARBON	4.7 5% 1/4W
R1604 Δ	I-246-513-75	CARBON	47K 5%	1/4W	R765	I-249-455-11	CARBON	4.7 5% 1/4W
R1605 Δ	I-218-265-91	METAL GLAZE	8.2M 5%	1W	R766	I-247-753-11	CARBON	1.2K 5% 1/2W
R5501	I-216-073-00	METAL GLAZE	10K 5%	1/10W	R767	I-247-751-11	CARBON	820 5% 1/2W
R5503	I-216-001-00	METAL GLAZE	10 5%	1/10W	R768	I-215-887-00	METAL OXIDE	150 5% 2W F
R5504	I-216-121-00	METAL GLAZE	1M 5%	1/10W				
R5505	I-216-001-00	METAL GLAZE	10 5%	1/10W				

The components identified by shading and mark **A** are critical for safety.
Replace only with part number specified.

VM H1 H2 J2 J1

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
R769	A1-212-889-51	FUSIBLE	220 5% 1/4W F	*A-1651-015-A	J1 BOARD, COMPLETE	*****		

	*1-633-409-11	H1 BOARD	*****	1-561-534-41	SOCKET 21P			
	1-562-837-11	JACK		*1-564-524-11	PLUG, CONNECTOR 9P			
	*1-564-512-11	PLUG, CONNECTOR 9P		*1-564-527-11	PLUG, CONNECTOR 12P			
	*1-568-879-51	PIN, CONNECTOR 4P		*1-566-641-11	CONNECTOR, HINGE (TAB) 18P			
	*1-568-881-51	PIN, CONNECTOR 6P						
	1-569-473-11	JACK BLOCK, PIN 3P						

		<RESISTOR>				<CAPACITOR>		
R1651	1-249-413-11	CARBON	470 5% 1/4W	C203	1-124-925-11	ELECT	2.2MF 20% 50V	
R1652	1-249-413-11	CARBON	470 5% 1/4W	C205	1-124-927-11	ELECT	4.7MF 20% 50V	

		<SWITCH>		C206	1-124-925-11	ELECT	2.2MF 20% 50V	
S1651	1-571-532-21	SWITCH, TACTIL		C207	1-124-927-11	ELECT	4.7MF 20% 50V	
S1652	1-571-532-21	SWITCH, TACTIL		C213	1-126-233-11	ELECT	22MF 20% 50V	
S1653	1-571-532-21	SWITCH, TACTIL						

	*1-633-410-11	H2 BOARD	*****	C214	1-106-363-00	MYLAR	0.0068MF 10% 400V	
				C217	1-106-363-00	MYLAR	0.0068MF 10% 400V	
	*1-568-882-51	PIN, CONNECTOR 7P		C218	1-106-375-12	MYLAR	0.022MF 10% 250V	
	*4-374-987-01	GUIDE, LIGHT		C219	1-106-375-12	MYLAR	0.022MF 10% 250V	
	*4-381-686-01	BRACKET (B), LIGHT GUIDE		C220	1-108-620-11	MYLAR	0.0033MF 10% 100V	

		<DIODE>		C221	1-108-620-11	MYLAR	0.0033MF 10% 100V	
D1651	8-719-948-31	DIODE LD-201VR		C222	1-106-385-00	MYLAR	0.056MF 10% 100V	
	*4-201-076-01	HOLDER, LED; D1651		C223	1-106-385-00	MYLAR	0.056MF 10% 100V	
D1652	8-719-948-31	DIODE LD-201VR		C224	1-106-367-00	MYLAR	0.01MF 10% 400V	
	*4-201-076-01	HOLDER, LED; D1652		C225	1-136-173-00	FILM	0.47MF 5% 50V	
D1654	8-719-948-31	DIODE LD-201VR						
	*4-201-076-01	HOLDER, LED; D1654		C226	1-136-173-00	FILM	0.47MF 5% 50V	

		<IC>		C227	1-106-375-12	MYLAR	0.022MF 10% 250V	
IC1651	8-741-138-70	IC BX-1387		C228	1-106-379-12	MYLAR	0.033MF 10% 250V	

		<RESISTOR>		C229	1-106-371-00	MYLAR	0.015MF 10% 400V	
R1662	1-249-413-11	CARBON	470 5% 1/4W	C230	1-106-371-00	MYLAR	0.015MF 10% 400V	

	*1-633-411-11	J2 BOARD	*****					
				C231	1-124-902-00	ELECT	0.47MF 20% 50V	
	1-537-088-21	TERMINAL BOARD, INPUT/OUTPUT		C232	1-123-875-11	ELECT	10MF 20% 50V	
	*1-560-278-21	PLUG, CONNECTOR 4P		C233	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	
	*1-564-517-11	PLUG, CONNECTOR 2P		C234	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	
	*1-564-519-11	PLUG, CONNECTOR 4P		C235	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	

		<CAPACITOR>		C236	1-163-005-11	CERAMIC CHIP	470PF 10% 50V	
C1751	1-101-005-00	CERAMIC	0.022MF	C237	1-124-902-00	ELECT	0.47MF 20% 50V	
C1752	1-101-005-00	CERAMIC	0.022MF	C238	1-163-125-00	CERAMIC CHIP	220PF 5% 50V	
C1755	1-102-114-00	CERAMIC	470PF	C239	1-126-103-11	ELECT	470MF 20% 16V	
C1756	1-102-114-00	CERAMIC	470PF	C240	1-163-018-00	CERAMIC CHIP	0.0056MF 10% 50V	

		<COIL>		C241	1-163-018-00	CERAMIC CHIP	0.0056MF 10% 50V	
L1751	1-412-240-11	INDUCTOR, WIDE BAND		C242	1-163-033-00	CERAMIC CHIP	0.022MF 50V	
L1752	1-412-240-11	INDUCTOR, WIDE BAND		C243	1-163-033-00	CERAMIC CHIP	0.022MF 50V	

				C244	1-163-033-00	CERAMIC CHIP	0.022MF 50V	
				C245	1-163-033-00	CERAMIC CHIP	0.022MF 50V	
				C1401	1-123-875-11	ELECT	10MF 20% 50V	
				C1402	1-126-103-11	ELECT	470MF 20% 16V	
				C1403	1-163-003-11	CERAMIC CHIP	330PF 10% 50V	
				C1404	1-106-220-00	MYLAR	0.1MF 10% 100V	
				C1405	1-136-017-00	CERAMIC CHIP	0.0047MF 50V	
				C1406	1-106-220-00	MYLAR	0.1MF 10% 100V	
				C1407	1-124-910-11	ELECT	47MF 20% 50V	
				C1408	1-124-122-11	ELECT	100MF 20% 50V	
				C1409	1-126-233-11	ELECT	22MF 20% 50V	
				C1410	1-123-875-11	ELECT	10MF 20% 50V	
				C1411	1-123-875-11	ELECT	10MF 20% 50V	
				C1412	1-124-910-11	ELECT	47MF 20% 50V	
				C1413	1-124-910-11	ELECT	47MF 20% 50V	
				C1414	1-123-875-11	ELECT	10MF 20% 50V	
				C1415	1-106-220-00	MYLAR	0.1MF 10% 100V	
				C1416	1-106-220-00	MYLAR	0.1MF 10% 100V	
				C1417	1-124-120-11	ELECT	220MF 20% 16V	

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK
C1418	1-163-003-11	CERAMIC CHIP 330PF	10%	50V	D1505	8-719-911-19	DIODE ISS119
C1419	1-163-003-11	CERAMIC CHIP 330PF	10%	50V	D1506	8-719-929-79	DIODE HZS36NB4
C1425	I-124-902-00	ELECT 0.47MF	20%	50V	D1507	8-719-911-19	DIODE ISS119
C1426	I-124-902-00	ELECT 0.47MF	20%	50V	D1510	8-719-911-19	DIODE ISS119
C1427	I-136-017-00	CERAMIC CHIP 0.0047MF		50V			
C1428	I-136-017-00	CERAMIC CHIP 0.0047MF		50V			<IC>
C1429	I-136-017-00	CERAMIC CHIP 0.0047MF		50V	IC201	8-759-013-17	IC TDA6200
C1430	I-163-003-11	CERAMIC CHIP 330PF	10%	50V	IC1401	8-752-032-27	IC CXA1114P
C1431	I-126-529-11	ELECT 0.47MF	20%	50V	IC1402	8-759-946-32	IC TEA2014A
C1432	I-124-902-00	ELECT 0.47MF	20%	50V	IC1403	8-759-040-53	IC MC14053BCP
C1433	I-124-122-11	ELECT 100MF	20%	50V	IC1501	8-759-942-16	IC TEA2031A
C1436	I-163-009-11	CERAMIC CHIP 0.001MF	10%	50V			
C1437	I-163-009-11	CERAMIC CHIP 0.001MF	10%	50V			
C1438	I-106-367-00	MYLAR 0.01MF	10%	400V			<TRANSISTOR>
C1439	I-106-367-00	MYLAR 0.01MF	10%	400V	Q201	8-729-271-22	TRANSISTOR 2SC2712-G
C1440	I-123-875-11	ELECT 10MF	20%	50V	Q202	8-729-271-22	TRANSISTOR 2SC2712-G
C1441	I-123-875-11	ELECT 10MF	20%	50V	Q1401	8-729-216-22	TRANSISTOR 2SA1162-G
C1442	I-106-220-00	MYLAR 0.1MF	10%	100V	Q1402	8-729-271-22	TRANSISTOR 2SC2712-G
C1443	I-106-220-00	MYLAR 0.1MF	10%	100V	Q1403	8-729-271-22	TRANSISTOR 2SC2712-G
C1444	I-124-910-11	ELECT 47MF	20%	50V	Q1404	8-729-216-22	TRANSISTOR 2SA1162-G
C1445	I-102-824-00	CERAMIC 470PF	5%	50V			
C1446	I-102-824-00	CERAMIC 470PF	5%	50V			
C1501	I-124-927-11	ELECT 4.7MF	20%	50V			<RESISTOR>
C1502	I-124-791-11	ELECT 1MF	20%	50V	R201	I-216-079-00	METAL GLAZE 18K 5% 1/10W
C1503	I-108-614-11	MYLAR 0.001MF	10%	100V	R202	I-216-206-00	METAL GLAZE 2.2K 5% 1/8W
C1504	I-124-910-11	ELECT 47MF	20%	50V	R203	I-216-075-00	METAL GLAZE 12K 5% 1/10W
C1505	I-106-383-00	MYLAR 0.047MF	10%	100V	R204	I-216-085-00	METAL GLAZE 33K 5% 1/10W
C1507	I-108-620-11	MYLAR 0.0033MF	10%	100V	R205	I-216-085-00	METAL GLAZE 33K 5% 1/10W
C1508	I-124-791-11	ELECT 1MF	20%	50V	R206	I-216-061-00	METAL GLAZE 3.3K 5% 1/10W
C1509	I-124-791-11	ELECT 1MF	20%	50V	R207	I-216-061-00	METAL GLAZE 3.3K 5% 1/10W
C1511	I-124-927-11	ELECT 4.7MF	20%	50V	R208	I-216-077-00	METAL GLAZE 15K 5% 1/10W
C1513	I-163-105-00	CERAMIC CHIP 33PF	5%	50V	R209	I-216-081-00	METAL GLAZE 22K 5% 1/10W
				R210	I-216-077-00	METAL GLAZE 15K 5% 1/10W	
				R211	I-216-097-00	METAL GLAZE 100K 5% 1/10W	
CN1401	1-565-838-11	PIN JACK BLOCK 2P		R212	I-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R213	I-216-077-00	METAL GLAZE 15K 5% 1/10W	
				R214	I-216-033-00	METAL GLAZE 220 5% 1/10W	
				R215	I-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R216	I-216-081-00	METAL GLAZE 22K 5% 1/10W	
				R217	I-216-077-00	METAL GLAZE 15K 5% 1/10W	
				R218	I-216-033-00	METAL GLAZE 220 5% 1/10W	
				R219	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R220	I-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R221	I-216-041-00	METAL GLAZE 470 5% 1/10W	
				R222	I-216-041-00	METAL GLAZE 470 5% 1/10W	
				R223	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R224	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R225	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R226	I-216-049-00	METAL GLAZE 1K 5% 1/10W	
				R227	I-216-033-00	METAL GLAZE 220 5% 1/10W	
				R228	I-216-033-00	METAL GLAZE 220 5% 1/10W	
				R229	I-216-075-00	METAL GLAZE 12K 5% 1/10W	
				R230	I-216-079-00	METAL GLAZE 18K 5% 1/10W	
				R231	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R232	I-216-073-00	METAL GLAZE 10K 5% 1/10W	
				R233	I-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R234	I-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R240	I-216-033-00	METAL GLAZE 220 5% 1/10W	
				R241	I-216-091-00	METAL GLAZE 56K 5% 1/10W	
				R242	I-216-091-00	METAL GLAZE 56K 5% 1/10W	
				R243	I-216-075-00	METAL GLAZE 12K 5% 1/10W	
				R244	I-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
				R245	I-216-075-00	METAL GLAZE 12K 5% 1/10W	

J1 | IFG

The components identified by shading and mark Δ are critical for safety.
Replace only with part number specified.

REF. NO.	PART NO.	DESCRIPTION	REMARK	REF. NO.	PART NO.	DESCRIPTION	REMARK	
C11	I-163-119-00	CERAMIC CHIP 120PF	5%	50V	R1	1-216-045-00	METAL GLAZE 680	5% 1/10W
C12	I-136-298-00	FILM 0.0033MF	2%	100V	R2	1-216-043-00	METAL GLAZE 560	5% 1/10W
C13	I-124-477-11	ELECT 47MF	20%	16V	R3	1-216-043-00	METAL GLAZE 560	5% 1/10W
C14	I-124-477-11	ELECT 47MF	20%	16V	R5	1-216-045-00	METAL GLAZE 680	5% 1/10W
C15	I-124-477-11	ELECT 47MF	20%	16V	R6	1-216-043-00	METAL GLAZE 560	5% 1/10W
C16	I-124-477-11	ELECT 47MF	20%	16V	R7	1-216-043-00	METAL GLAZE 560	5% 1/10W
C17	I-123-875-11	ELECT 10MF	20%	50V	R9	1-216-073-00	METAL GLAZE 10K	5% 1/10W
C18	I-106-367-00	MYLAR 0.01MF	10%	400V	R10	1-216-077-00	METAL GLAZE 15K	5% 1/10W
C19	I-106-367-00	MYLAR 0.01MF	10%	400V	R11	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C20	I-126-233-11	ELECT 22MF	20%	50V	R12	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C21	I-126-233-11	ELECT 22MF	20%	50V	R15	1-216-059-00	METAL GLAZE 2.7K	5% 1/10W
C22	I-106-220-00	MYLAR 0.1MF	10%	100V	R16	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C23	I-106-228-00	MYLAR 0.22MF	10%	100V	R17	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C24	I-124-963-11	ELECT 33MF	20%	16V	R18	1-216-063-00	METAL GLAZE 3.9K	5% 1/10W
C25	I-106-375-12	MYLAR 0.022MF	10%	250V	R19	1-216-097-00	METAL GLAZE 100K	5% 1/10W
C26	I-106-383-00	MYLAR 0.047MF	10%	100V	R20	1-216-075-00	METAL GLAZE 12K	5% 1/10W
C27	I-124-791-11	ELECT 1MF	20%	50V	R22	1-216-099-00	METAL GLAZE 120K	5% 1/10W
C28	I-163-103-00	CERAMIC CHIP 27PF	5%	50V	R24	1-216-089-00	METAL GLAZE 47K	5% 1/10W
C29	I-124-791-11	ELECT 1MF	20%	50V	R25	1-216-077-00	METAL GLAZE 15K	5% 1/10W
C30	I-124-791-11	ELECT 1MF	20%	50V	<VARIABLE RESISTOR>			
C31	I-106-367-00	MYLAR 0.01MF	10%	400V	RVI	I-238-016-11	RES, ADJ, CARBON 10K	
C32	I-130-479-00	MYLAR 0.0047MF	5%	50V	RV2	I-238-019-11	RES, ADJ, CARBON 47K	
C33	I-163-081-00	CERAMIC CHIP 0.22MF		25V	*****			
C34	I-106-228-00	MYLAR 0.22MF	10%	100V	*****			
C35	I-123-875-11	ELECT 10MF	20%	50V	MISCELLANEOUS			
C36	I-163-119-00	CERAMIC CHIP 120PF	5%	50V	*****			
C37	I-124-477-11	ELECT 47MF	20%	16V	*****			
C38	I-124-477-11	ELECT 47MF	20%	16V	*****			
<FILTER>								
CDA1	I-404-751-11	DISCRIMINATOR, CERAMIC			Δ . 1-426-398-11 COIL, DEMAGNETIZATION			
CDA2	I-404-750-11	DISCRIMINATOR, CERAMIC			Δ . 1-451-313-21 DEFLECTION YOKE (Y29FXA)			
SFT1	I-527-840-00	FILTER, CERAMIC			1-452-032-00 MAGNET, DISK; 10MM ϕ			
SFT2	I-527-839-00	FILTER, CERAMIC			1-452-094-00 MAGNET, ROTATABLE DISK; 15MM ϕ			
<DIODE>								
D3	8-719-400-18	DIODE MA152WK			Δ . 1-452-509-42 NECK ASSY, PICTURE TUBE (NA-308)			
<IC>								
IC1	8-759-003-90	IC TBA129			SPEAKER			
IC2	8-759-003-90	IC TBA129			Δ . 1-575-487-11 CORD, POWER (WITH NOISE FILTER)			
IC3	8-759-030-48	IC TDA6600-2			V901 Δ . 8-733-823-05 PICTURE TUBE (A68JYK60X)			
IC4	8-759-946-99	IC TDA2595-V7			*****			
<COIL>								
L1	I-408-410-00	INDUCTOR 12UH			ACCESORIES AND PACKING MATERIALS			
L2	I-408-410-00	INDUCTOR 12UH			*****			
L3	I-410-064-11	INDUCTOR 2.7MH			PART NO.			
L4	I-408-421-00	INDUCTOR 100UH			DESCRIPTION			
L5	I-408-421-00	INDUCTOR 100UH			REMARK			
<TRANSISTOR>								
Q2	8-729-901-00	TRANSISTOR DTC124EK			3-752-237-11 MANUAL, INSTRUCTION			
Q3	8-729-216-22	TRANSISTOR 2SA1162-G			*4-384-027-01 BAG, PROTECTION			
Q4	8-729-901-00	TRANSISTOR DTC124EK			*4-398-903-01 CUSHION (UPPER) (ASSY)			
<RESISTOR>					*4-398-904-01 CUSHION (LOWER) (ASSY)			
JR8	I-216-296-00	METAL GLAZE 0 5%	1/8W		*4-398-905-01 INDIVIDUAL CARTON			
JR10	I-216-296-00	METAL GLAZE 0 5%	1/8W		REMOTE COMMANDER			
<RESISTOR>								
					I-465-363-11 COMMANDER, REMOTE (RM-689)			
					4-395-610-01 COVER, BATTERY (FOR RM-689)			

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